

## Appendix I, Groundwater

# **Attachment I-1      C2VSimFG Results for Model Subregions**

This Attachment provides simulated groundwater pumping and groundwater-surface water interaction flow for each subregion defined in the C2VSimFG model (Figure I.2-1).

### **I-1.1      Groundwater Pumping**

#### **I-1.1.1      Annual Groundwater Pumping**

Table I.1-1 through Table I.1-21 provide the annual simulated groundwater pumping through the model simulation period for each of the 21 model subregions.

Table I.1-1. Simulated Groundwater Pumping in C2VSimFG Subregion 1 (SR1)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 55,882   | 55,937    | 55,849      | 55,933           | 55,948      | 55,928      | 55,952    | 55,865    |
| 2    | W, W  | 58,462   | 58,384    | 58,332      | 58,424           | 58,436      | 58,426      | 58,493    | 58,406    |
| 3    | C, C  | 61,356   | 61,201    | 62,381      | 62,416           | 62,376      | 62,157      | 64,124    | 62,152    |
| 4    | C, C  | 76,356   | 78,162    | 82,772      | 82,907           | 82,847      | 82,709      | 103,700   | 79,952    |
| 5    | AN, W   | 59,956   | 61,454    | 60,099      | 60,028           | 60,060      | 60,102      | 63,678    | 59,494    |
| 6    | BN, AN  | 61,436   | 60,661    | 61,510      | 62,190           | 61,310      | 62,093      | 60,703    | 60,848    |
| 7    | AN, W   | 59,453   | 59,349    | 59,387      | 59,615           | 59,458      | 59,549      | 59,314    | 59,408    |
| 8    | D, D  | 62,974   | 62,367    | 62,807      | 62,774           | 63,074      | 63,004      | 62,750    | 62,350    |
| 9    | W, W  | 55,869   | 55,928    | 55,818      | 55,812           | 55,773      | 55,941      | 55,898    | 55,767    |
| 10   | W, W  | 55,327   | 55,380    | 55,434      | 55,285           | 55,341      | 55,434      | 55,376    | 55,349    |
| 11   | W, AN   | 60,511   | 60,573    | 60,513      | 60,518           | 60,529      | 60,646      | 60,593    | 60,510    |
| 12   | D, D  | 62,888   | 63,060    | 63,457      | 63,402           | 63,502      | 63,451      | 63,184    | 63,043    |
| 13   | W, W  | 59,631   | 59,554    | 59,610      | 59,690           | 59,600      | 59,635      | 59,540    | 59,479    |
| 14   | D, D  | 72,008   | 71,053    | 73,809      | 73,748           | 73,862      | 73,910      | 79,482    | 71,192    |
| 15   | C, C  | 75,129   | 72,476    | 78,877      | 78,740           | 77,768      | 78,856      | 80,268    | 78,070    |
| 16   | D, C  | 69,429   | 68,007    | 69,913      | 69,956           | 69,676      | 70,253      | 69,366    | 69,763    |
| 17   | C, C  | 71,112   | 70,188    | 67,954      | 67,877           | 68,500      | 68,396      | 71,010    | 69,211    |
| 18   | C, C  | 82,399   | 82,105    | 86,671      | 86,688           | 86,931      | 87,169      | 88,680    | 85,158    |
| 19   | C, C  | 87,447   | 88,052    | 89,719      | 89,648           | 89,679      | 89,731      | 90,844    | 86,473    |
| 20   | AN, W   | 60,004   | 60,359    | 60,330      | 60,328           | 60,347      | 60,274      | 60,354    | 59,885    |
| 21   | C, C  | 71,204   | 71,158    | 75,411      | 75,770           | 74,586      | 75,453      | 78,615    | 71,081    |
| 22   | W, W  | 63,400   | 63,417    | 64,753      | 64,791           | 64,494      | 64,250      | 64,760    | 63,494    |
| 23   | W, W  | 59,430   | 59,408    | 59,456      | 59,458           | 59,370      | 59,334      | 59,332    | 59,303    |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)      | Alt1 (AF)     | Alt2v1 (AF)   | Alt2v1wTUCP (AF) | Alt2v2 (AF)   | Alt2v3 (AF)   | Alt3 (AF)      | Alt4 (AF)     |
|----------------|---|---------------|---------------|---------------|------------------|---------------|---------------|----------------|---------------|
| 24             | W, W  | 61,368        | 61,232        | 61,335        | 61,423           | 61,411        | 61,181        | 61,325         | 61,320        |
| 25             | W, W  | 55,731        | 55,778        | 55,670        | 55,683           | 55,709        | 55,680        | 55,603         | 55,586        |
| 26             | W, AN   | 60,067        | 59,978        | 59,913        | 59,879           | 60,005        | 59,996        | 59,937         | 59,938        |
| 27             | AN, AN  | 60,297        | 60,212        | 60,335        | 60,235           | 60,220        | 60,262        | 60,124         | 60,351        |
| 28             | D, D  | 62,212        | 61,832        | 63,483        | 63,574           | 62,349        | 63,229        | 65,569         | 61,829        |
| 29             | D, D  | 65,737        | 65,856        | 66,216        | 66,266           | 65,656        | 66,078        | 66,350         | 65,646        |
| 30             | AN, BN  | 61,992        | 62,070        | 62,109        | 62,003           | 61,966        | 61,944        | 61,993         | 61,849        |
| 31             | BN, D   | 64,444        | 64,493        | 64,427        | 64,399           | 64,494        | 64,417        | 68,218         | 64,528        |
| 32             | AN, W   | 58,315        | 58,247        | 58,306        | 58,325           | 58,271        | 58,282        | 58,166         | 58,290        |
| 33             | W, W  | 64,124        | 64,111        | 63,984        | 64,157           | 64,065        | 64,054        | 64,032         | 64,047        |
| 34             | D, C  | 65,681        | 65,895        | 65,777        | 65,770           | 65,766        | 65,708        | 69,313         | 65,701        |
| 35             | C, C  | 69,648        | 68,082        | 73,014        | 73,007           | 72,512        | 71,971        | 76,860         | 71,734        |
| 36             | D, BN   | 68,904        | 67,098        | 69,588        | 69,661           | 70,663        | 68,921        | 72,587         | 67,094        |
| 37             | BN, AN  | 59,474        | 59,127        | 59,419        | 59,472           | 59,630        | 59,286        | 59,426         | 58,947        |
| 38             | W, W  | 57,951        | 57,882        | 57,918        | 57,949           | 57,916        | 57,938        | 57,944         | 57,844        |
| 39             | BN, D   | 62,479        | 62,502        | 62,442        | 62,459           | 62,408        | 62,398        | 62,498         | 62,482        |
| 40             | D, C  | 69,794        | 69,455        | 73,365        | 73,432           | 73,238        | 73,348        | 76,337         | 72,399        |
| 41             | C, C  | 85,834        | 85,776        | 92,715        | 92,744           | 92,752        | 92,775        | 111,958        | 90,270        |
| 42             | C, C  | 89,363        | 89,173        | 88,070        | 89,318           | 89,275        | 89,336        | 106,369        | 92,129        |
| <b>Average</b> |   | <b>65,359</b> | <b>65,167</b> | <b>66,261</b> | <b>66,327</b>    | <b>66,233</b> | <b>66,274</b> | <b>68,586</b>  | <b>65,672</b> |
| <b>Maximum</b> |   | <b>89,363</b> | <b>89,173</b> | <b>92,715</b> | <b>92,744</b>    | <b>92,752</b> | <b>92,775</b> | <b>111,958</b> | <b>92,129</b> |
| <b>Minimum</b> |   | <b>55,327</b> | <b>55,380</b> | <b>55,434</b> | <b>55,285</b>    | <b>55,341</b> | <b>55,434</b> | <b>55,376</b>  | <b>55,349</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-2. Simulated Groundwater Pumping in C2VSimFG Subregion 2 (SR2)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 480,334  | 480,338   | 480,341     | 480,323          | 480,410     | 480,414     | 480,301   | 480,334   |
| 2    | W, W  | 505,475  | 505,470   | 505,577     | 505,577          | 505,568     | 505,616     | 505,712   | 505,380   |
| 3    | C, C  | 555,899  | 555,706   | 559,024     | 559,009          | 558,966     | 558,714     | 561,243   | 558,643   |
| 4    | C, C  | 650,224  | 649,521   | 654,942     | 654,936          | 654,952     | 654,867     | 659,918   | 654,168   |
| 5    | AN, W   | 515,675  | 520,384   | 516,246     | 516,298          | 516,405     | 516,393     | 516,463   | 516,189   |
| 6    | BN, AN  | 533,365  | 526,770   | 534,175     | 534,978          | 534,044     | 534,807     | 528,641   | 525,330   |
| 7    | AN, W   | 496,541  | 495,103   | 496,681     | 496,844          | 496,564     | 496,722     | 495,554   | 494,816   |
| 8    | D, D  | 551,436  | 550,193   | 550,548     | 550,549          | 553,064     | 552,509     | 550,602   | 549,726   |
| 9    | W, W  | 459,951  | 459,762   | 459,854     | 459,829          | 460,173     | 460,016     | 459,803   | 459,712   |
| 10   | W, W  | 424,818  | 424,809   | 424,818     | 424,777          | 424,652     | 424,638     | 424,800   | 424,810   |
| 11   | W, AN   | 537,890  | 537,885   | 537,892     | 537,884          | 537,809     | 537,819     | 537,890   | 537,756   |
| 12   | D, D  | 582,696  | 582,844   | 585,637     | 585,639          | 585,661     | 585,689     | 584,009   | 581,385   |
| 13   | W, W  | 517,652  | 517,350   | 518,632     | 518,629          | 518,487     | 518,307     | 518,181   | 517,129   |
| 14   | D, D  | 594,000  | 590,519   | 598,079     | 598,075          | 598,305     | 598,221     | 605,181   | 591,311   |
| 15   | C, C  | 616,065  | 609,548   | 626,758     | 626,791          | 623,813     | 626,763     | 633,732   | 624,606   |
| 16   | D, C  | 587,684  | 579,605   | 589,354     | 589,386          | 586,023     | 590,604     | 585,661   | 584,666   |
| 17   | C, C  | 520,081  | 515,571   | 523,031     | 523,083          | 517,119     | 523,245     | 524,363   | 517,631   |
| 18   | C, C  | 599,229  | 598,171   | 604,997     | 604,998          | 603,682     | 604,978     | 604,718   | 603,085   |
| 19   | C, C  | 648,470  | 648,681   | 649,395     | 649,542          | 649,202     | 649,205     | 649,928   | 648,242   |
| 20   | AN, W   | 484,521  | 484,591   | 484,470     | 484,483          | 484,448     | 484,561     | 484,534   | 484,279   |
| 21   | C, C  | 556,116  | 555,249   | 567,648     | 568,211          | 565,474     | 567,451     | 571,591   | 553,702   |
| 22   | W, W  | 504,395  | 504,165   | 507,683     | 507,794          | 507,086     | 507,602     | 508,111   | 503,792   |
| 23   | W, W  | 508,011  | 507,997   | 508,029     | 508,024          | 507,958     | 507,956     | 508,011   | 507,982   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 519,755        | 519,750        | 519,763        | 519,765          | 519,624        | 519,620        | 519,769        | 519,755        |
| 25             | W, W  | 408,213        | 408,204        | 408,205        | 408,214          | 408,071        | 408,062        | 408,325        | 408,205        |
| 26             | W, AN   | 487,044        | 487,044        | 487,082        | 487,081          | 487,085        | 487,085        | 487,042        | 486,993        |
| 27             | AN, AN  | 504,996        | 504,995        | 505,022        | 505,022          | 504,915        | 504,904        | 505,004        | 504,951        |
| 28             | D, D  | 522,403        | 518,892        | 525,536        | 525,541          | 523,653        | 524,829        | 529,145        | 519,250        |
| 29             | D, D  | 560,709        | 560,258        | 561,137        | 561,146          | 560,770        | 560,631        | 561,775        | 559,596        |
| 30             | AN, BN  | 509,964        | 510,095        | 509,944        | 509,946          | 509,847        | 509,865        | 509,990        | 509,814        |
| 31             | BN, D   | 566,860        | 565,999        | 566,086        | 566,094          | 565,968        | 566,376        | 571,845        | 565,884        |
| 32             | AN, W   | 460,114        | 460,012        | 460,111        | 460,111          | 460,052        | 460,148        | 460,039        | 460,014        |
| 33             | W, W  | 502,463        | 502,468        | 502,466        | 502,468          | 502,419        | 502,397        | 502,454        | 502,456        |
| 34             | D, C  | 576,816        | 577,196        | 577,039        | 577,040          | 577,025        | 577,058        | 581,696        | 577,005        |
| 35             | C, C  | 572,492        | 570,292        | 579,988        | 580,067          | 578,720        | 577,535        | 582,559        | 577,251        |
| 36             | D, BN   | 583,841        | 580,004        | 585,358        | 585,554          | 587,892        | 583,970        | 588,638        | 580,505        |
| 37             | BN, AN  | 471,656        | 471,136        | 471,593        | 471,630          | 472,172        | 471,505        | 471,898        | 470,798        |
| 38             | W, W  | 461,249        | 461,253        | 461,254        | 461,240          | 461,200        | 461,208        | 461,253        | 461,256        |
| 39             | BN, D   | 558,516        | 558,414        | 558,515        | 558,515          | 558,456        | 558,467        | 558,217        | 558,194        |
| 40             | D, C  | 625,646        | 622,230        | 633,091        | 633,063          | 632,732        | 632,850        | 635,654        | 630,966        |
| 41             | C, C  | 653,812        | 652,951        | 659,754        | 659,766          | 659,666        | 659,647        | 664,155        | 658,306        |
| 42             | C, C  | 629,060        | 632,803        | 628,737        | 634,568          | 634,267        | 634,266        | 634,255        | 631,258        |
| <b>Average</b> |   | <b>538,241</b> | <b>537,244</b> | <b>540,107</b> | <b>540,297</b>   | <b>539,867</b> | <b>540,179</b> | <b>541,254</b> | <b>538,265</b> |
| <b>Maximum</b> |   | <b>653,812</b> | <b>652,951</b> | <b>659,754</b> | <b>659,766</b>   | <b>659,666</b> | <b>659,647</b> | <b>664,155</b> | <b>658,306</b> |
| <b>Minimum</b> |   | <b>408,213</b> | <b>408,204</b> | <b>408,205</b> | <b>408,214</b>   | <b>408,071</b> | <b>408,062</b> | <b>408,325</b> | <b>408,205</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-3. Simulated Groundwater Pumping in C2VSimFG Subregion 3 (SR3)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 292,306  | 292,306   | 292,306     | 292,280          | 289,150     | 290,033     | 294,967   | 292,280   |
| 2    | W, W  | 308,162  | 308,162   | 309,405     | 309,405          | 306,232     | 307,816     | 313,891   | 306,261   |
| 3    | C, C  | 451,269  | 450,299   | 468,469     | 468,487          | 465,694     | 465,182     | 497,164   | 466,487   |
| 4    | C, C  | 576,011  | 584,901   | 650,650     | 650,653          | 649,496     | 649,222     | 860,221   | 626,756   |
| 5    | AN, W   | 354,568  | 356,940   | 358,542     | 359,794          | 356,648     | 358,193     | 368,844   | 357,824   |
| 6    | BN, AN  | 378,740  | 343,202   | 383,444     | 387,686          | 380,156     | 386,671     | 355,991   | 335,760   |
| 7    | AN, W   | 313,795  | 306,976   | 314,554     | 315,380          | 311,358     | 314,320     | 308,994   | 304,828   |
| 8    | D, D  | 356,010  | 350,171   | 351,227     | 351,236          | 353,003     | 361,789     | 354,380   | 343,147   |
| 9    | W, W  | 245,986  | 244,788   | 245,507     | 245,508          | 243,806     | 244,651     | 247,662   | 244,069   |
| 10   | W, W  | 242,589  | 242,589   | 242,683     | 242,683          | 239,858     | 239,878     | 243,900   | 242,589   |
| 11   | W, AN   | 326,358  | 326,350   | 326,664     | 326,732          | 323,472     | 323,528     | 329,338   | 324,396   |
| 12   | D, D  | 393,903  | 394,668   | 409,708     | 409,718          | 406,688     | 408,478     | 404,445   | 387,256   |
| 13   | W, W  | 338,526  | 334,303   | 348,344     | 348,349          | 344,728     | 343,210     | 346,129   | 332,731   |
| 14   | D, D  | 420,614  | 401,988   | 443,186     | 443,169          | 442,001     | 443,052     | 496,663   | 406,528   |
| 15   | C, C  | 446,702  | 413,907   | 501,908     | 501,905          | 484,196     | 500,396     | 574,063   | 493,727   |
| 16   | D, C  | 404,837  | 364,814   | 410,589     | 410,749          | 391,372     | 415,720     | 405,972   | 398,751   |
| 17   | C, C  | 472,648  | 452,847   | 497,828     | 497,843          | 440,390     | 497,901     | 521,073   | 451,960   |
| 18   | C, C  | 533,349  | 530,112   | 623,560     | 623,560          | 613,627     | 622,495     | 610,891   | 591,750   |
| 19   | C, C  | 599,360  | 602,156   | 606,463     | 608,044          | 594,661     | 594,752     | 617,443   | 585,773   |
| 20   | AN, W   | 323,653  | 324,645   | 323,367     | 323,522          | 320,928     | 324,226     | 324,543   | 320,380   |
| 21   | C, C  | 400,433  | 395,441   | 465,889     | 469,070          | 446,916     | 460,041     | 502,326   | 387,052   |
| 22   | W, W  | 320,251  | 319,185   | 334,399     | 335,070          | 329,302     | 332,008     | 338,188   | 317,378   |
| 23   | W, W  | 298,577  | 298,510   | 298,722     | 298,765          | 295,550     | 295,594     | 300,219   | 298,063   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 305,634        | 305,579        | 305,797        | 305,797          | 302,470        | 302,513        | 308,039        | 305,634        |
| 25             | W, W  | 224,910        | 224,907        | 224,962        | 224,962          | 221,820        | 221,864        | 226,810        | 224,910        |
| 26             | W, AN   | 273,860        | 273,873        | 274,503        | 274,503          | 271,283        | 271,493        | 276,328        | 272,943        |
| 27             | AN, AN  | 280,781        | 280,781        | 281,188        | 281,188          | 277,877        | 279,882        | 281,796        | 279,947        |
| 28             | D, D  | 368,457        | 349,403        | 385,120        | 385,152          | 372,608        | 381,345        | 418,103        | 351,386        |
| 29             | D, D  | 361,076        | 354,264        | 357,334        | 357,345          | 356,554        | 354,766        | 362,285        | 352,708        |
| 30             | AN, BN  | 298,064        | 297,798        | 298,014        | 298,016          | 294,528        | 297,043        | 300,459        | 296,044        |
| 31             | BN, D   | 343,121        | 330,301        | 332,911        | 332,910          | 327,409        | 336,271        | 375,199        | 328,697        |
| 32             | AN, W   | 280,883        | 278,886        | 280,580        | 280,576          | 277,038        | 280,455        | 280,213        | 278,827        |
| 33             | W, W  | 292,720        | 292,676        | 292,802        | 292,802          | 289,571        | 290,534        | 296,139        | 292,390        |
| 34             | D, C  | 358,409        | 363,298        | 361,593        | 361,598          | 358,530        | 360,617        | 401,422        | 360,621        |
| 35             | C, C  | 411,487        | 399,262        | 452,151        | 452,546          | 442,610        | 439,689        | 478,901        | 437,483        |
| 36             | D, BN   | 450,562        | 430,687        | 458,114        | 458,975          | 468,811        | 451,090        | 488,666        | 432,592        |
| 37             | BN, AN  | 284,234        | 281,744        | 284,275        | 284,491          | 284,894        | 283,819        | 287,713        | 279,474        |
| 38             | W, W  | 268,329        | 268,104        | 268,340        | 268,340          | 265,091        | 265,939        | 271,661        | 268,329        |
| 39             | BN, D   | 344,943        | 343,976        | 344,932        | 344,933          | 341,239        | 342,927        | 347,356        | 343,400        |
| 40             | D, C  | 408,267        | 390,619        | 446,746        | 446,592          | 442,276        | 446,208        | 470,559        | 436,182        |
| 41             | C, C  | 580,549        | 576,785        | 667,293        | 667,262          | 665,353        | 667,008        | 867,456        | 630,127        |
| 42             | C, C  | 594,332        | 595,486        | 595,810        | 609,758          | 599,013        | 600,104        | 781,879        | 648,726        |
| <b>Average</b> |   | <b>369,744</b> | <b>363,754</b> | <b>383,807</b> | <b>384,461</b>   | <b>378,291</b> | <b>382,208</b> | <b>408,055</b> | <b>372,290</b> |
| <b>Maximum</b> |   | <b>599,360</b> | <b>602,156</b> | <b>667,293</b> | <b>667,262</b>   | <b>665,353</b> | <b>667,008</b> | <b>867,456</b> | <b>648,726</b> |
| <b>Minimum</b> |   | <b>224,910</b> | <b>224,907</b> | <b>224,962</b> | <b>224,962</b>   | <b>221,820</b> | <b>221,864</b> | <b>226,810</b> | <b>224,910</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-4. Simulated Groundwater Pumping in C2VSimFG Subregion 4 (SR4)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 327,147  | 327,147   | 327,147     | 327,095          | 318,501     | 323,992     | 312,574   | 327,147   |
| 2    | W, W  | 343,366  | 335,469   | 343,390     | 343,390          | 334,674     | 342,605     | 333,349   | 342,271   |
| 3    | C, C  | 366,659  | 367,700   | 366,740     | 366,740          | 357,467     | 361,829     | 370,769   | 366,723   |
| 4    | C, C  | 376,026  | 379,280   | 410,171     | 410,171          | 407,874     | 407,872     | 635,199   | 391,656   |
| 5    | AN, W   | 343,989  | 344,051   | 345,080     | 345,163          | 336,819     | 345,900     | 351,764   | 343,710   |
| 6    | BN, AN  | 335,809  | 337,018   | 336,834     | 336,836          | 328,290     | 340,211     | 318,261   | 336,760   |
| 7    | AN, W   | 322,594  | 315,310   | 315,491     | 315,470          | 309,880     | 318,266     | 305,028   | 315,341   |
| 8    | D, D  | 350,488  | 350,450   | 350,022     | 350,069          | 340,724     | 359,131     | 350,830   | 350,434   |
| 9    | W, W  | 300,888  | 309,531   | 311,813     | 311,813          | 302,740     | 307,539     | 306,842   | 309,284   |
| 10   | W, W  | 311,610  | 311,610   | 311,610     | 311,610          | 301,835     | 301,835     | 311,635   | 311,610   |
| 11   | W, AN   | 335,892  | 335,903   | 335,903     | 335,903          | 327,039     | 327,039     | 329,374   | 335,881   |
| 12   | D, D  | 354,547  | 354,548   | 354,575     | 354,575          | 344,649     | 354,748     | 355,160   | 354,532   |
| 13   | W, W  | 337,047  | 337,036   | 337,067     | 337,065          | 328,595     | 333,818     | 326,432   | 337,030   |
| 14   | D, D  | 365,121  | 363,193   | 365,166     | 365,165          | 355,950     | 362,411     | 378,210   | 365,095   |
| 15   | C, C  | 340,382  | 341,101   | 341,462     | 341,462          | 331,806     | 336,308     | 346,885   | 340,449   |
| 16   | D, C  | 354,652  | 354,692   | 353,849     | 353,849          | 343,775     | 355,344     | 354,888   | 353,563   |
| 17   | C, C  | 321,214  | 321,298   | 307,201     | 307,204          | 306,770     | 310,459     | 331,766   | 312,911   |
| 18   | C, C  | 329,582  | 331,451   | 360,999     | 360,179          | 359,981     | 359,267     | 372,333   | 346,826   |
| 19   | C, C  | 355,770  | 355,483   | 357,796     | 357,796          | 346,315     | 346,315     | 365,464   | 344,614   |
| 20   | AN, W   | 323,959  | 321,552   | 325,138     | 323,807          | 312,584     | 323,319     | 313,289   | 324,035   |
| 21   | C, C  | 335,336  | 334,267   | 336,223     | 336,272          | 324,791     | 331,667     | 346,847   | 334,239   |
| 22   | W, W  | 330,201  | 330,199   | 330,209     | 330,228          | 321,319     | 323,140     | 330,279   | 330,196   |
| 23   | W, W  | 338,991  | 337,638   | 338,994     | 338,994          | 329,799     | 329,806     | 326,304   | 338,309   |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 326,823        | 326,823        | 326,823        | 326,823          | 317,796        | 317,796        | 325,312        | 326,823        |
| 25             | W, W  | 313,384        | 313,384        | 313,384        | 313,384          | 304,798        | 304,798        | 313,412        | 313,384        |
| 26             | W, AN   | 318,545        | 318,534        | 318,546        | 318,550          | 309,825        | 309,822        | 299,378        | 318,530        |
| 27             | AN, AN  | 328,723        | 331,233        | 331,236        | 331,236          | 322,148        | 331,539        | 326,167        | 331,211        |
| 28             | D, D  | 330,930        | 330,915        | 330,975        | 330,975          | 321,202        | 337,599        | 339,858        | 330,919        |
| 29             | D, D  | 337,593        | 337,588        | 337,602        | 337,601          | 327,244        | 345,225        | 337,026        | 337,565        |
| 30             | AN, BN  | 329,944        | 331,429        | 329,896        | 329,940          | 321,544        | 337,583        | 324,278        | 331,412        |
| 31             | BN, D   | 342,073        | 343,452        | 341,576        | 341,577          | 331,937        | 351,155        | 350,476        | 340,373        |
| 32             | AN, W   | 319,495        | 319,482        | 319,501        | 319,492          | 310,745        | 328,292        | 318,248        | 319,482        |
| 33             | W, W  | 324,944        | 322,423        | 324,944        | 325,921          | 315,191        | 321,449        | 327,537        | 325,918        |
| 34             | D, C  | 363,803        | 363,816        | 363,809        | 363,809          | 352,931        | 364,338        | 375,550        | 363,779        |
| 35             | C, C  | 341,774        | 341,754        | 341,812        | 341,813          | 330,941        | 349,075        | 352,142        | 341,753        |
| 36             | D, BN   | 365,079        | 365,039        | 364,030        | 364,099          | 354,310        | 369,132        | 375,895        | 364,061        |
| 37             | BN, AN  | 319,419        | 319,395        | 319,434        | 319,435          | 310,425        | 325,381        | 332,749        | 319,387        |
| 38             | W, W  | 323,315        | 324,421        | 323,355        | 323,355          | 314,871        | 319,954        | 325,984        | 322,873        |
| 39             | BN, D   | 347,947        | 347,972        | 347,974        | 347,974          | 339,052        | 349,032        | 347,770        | 347,953        |
| 40             | D, C  | 368,285        | 368,236        | 368,346        | 368,346          | 359,214        | 370,473        | 379,632        | 368,297        |
| 41             | C, C  | 380,967        | 380,951        | 418,814        | 418,814          | 416,597        | 421,326        | 626,087        | 397,246        |
| 42             | C, C  | 369,705        | 372,156        | 370,952        | 375,863          | 364,694        | 365,169        | 518,990        | 386,006        |
| <b>Average</b> |   | <b>339,381</b> | <b>339,403</b> | <b>341,807</b> | <b>341,902</b>   | <b>333,277</b> | <b>340,999</b> | <b>356,428</b> | <b>340,466</b> |
| <b>Maximum</b> |   | <b>380,967</b> | <b>380,951</b> | <b>418,814</b> | <b>418,814</b>   | <b>416,597</b> | <b>421,326</b> | <b>635,199</b> | <b>397,246</b> |
| <b>Minimum</b> |   | <b>300,888</b> | <b>309,531</b> | <b>307,201</b> | <b>307,204</b>   | <b>301,835</b> | <b>301,835</b> | <b>299,378</b> | <b>309,284</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-5. Simulated Groundwater Pumping in C2VSimFG Subregion 5 (SR5)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 372,918  | 372,948   | 372,874     | 372,835          | 372,897     | 372,779     | 373,812   | 372,991   |
| 2    | W, W  | 396,935  | 397,018   | 397,099     | 396,981          | 396,606     | 396,576     | 397,520   | 397,052   |
| 3    | C, C  | 446,548  | 446,329   | 447,780     | 447,720          | 447,466     | 447,099     | 448,503   | 447,473   |
| 4    | C, C  | 574,544  | 575,000   | 574,699     | 574,921          | 578,349     | 577,990     | 581,471   | 574,181   |
| 5    | AN, W   | 468,257  | 470,458   | 466,913     | 468,810          | 465,721     | 465,739     | 473,219   | 456,301   |
| 6    | BN, AN  | 414,003  | 411,465   | 414,450     | 414,642          | 412,694     | 413,056     | 411,792   | 410,527   |
| 7    | AN, W   | 388,270  | 387,977   | 388,322     | 388,208          | 387,993     | 387,916     | 388,959   | 387,812   |
| 8    | D, D  | 473,883  | 472,856   | 473,590     | 473,648          | 474,734     | 474,039     | 474,502   | 473,004   |
| 9    | W, W  | 350,709  | 350,536   | 350,883     | 350,779          | 350,596     | 350,546     | 351,388   | 350,688   |
| 10   | W, W  | 339,498  | 339,573   | 339,604     | 339,545          | 338,878     | 338,725     | 339,519   | 339,476   |
| 11   | W, AN   | 419,846  | 419,781   | 419,852     | 419,969          | 419,441     | 419,553     | 420,722   | 419,773   |
| 12   | D, D  | 463,064  | 463,280   | 463,759     | 463,751          | 463,408     | 463,350     | 464,179   | 461,782   |
| 13   | W, W  | 401,415  | 400,833   | 401,562     | 401,639          | 400,858     | 401,012     | 402,213   | 401,491   |
| 14   | D, D  | 483,167  | 481,737   | 484,954     | 485,012          | 484,688     | 484,730     | 487,914   | 482,198   |
| 15   | C, C  | 477,052  | 474,320   | 481,250     | 481,358          | 479,037     | 480,344     | 486,013   | 480,749   |
| 16   | D, C  | 460,565  | 446,718   | 457,367     | 457,306          | 448,718     | 456,995     | 453,909   | 447,990   |
| 17   | C, C  | 406,090  | 405,043   | 406,769     | 406,353          | 406,138     | 406,313     | 410,184   | 406,546   |
| 18   | C, C  | 464,882  | 463,755   | 464,738     | 464,305          | 467,797     | 468,113     | 471,730   | 464,886   |
| 19   | C, C  | 511,885  | 518,141   | 511,527     | 511,707          | 516,504     | 516,582     | 523,515   | 511,378   |
| 20   | AN, W   | 385,546  | 387,554   | 387,794     | 387,435          | 385,006     | 384,884     | 389,066   | 387,550   |
| 21   | C, C  | 475,110  | 474,766   | 479,964     | 480,214          | 478,295     | 479,278     | 481,745   | 474,091   |
| 22   | W, W  | 395,781  | 395,745   | 396,909     | 396,950          | 396,264     | 396,456     | 397,393   | 395,599   |
| 23   | W, W  | 384,968  | 384,972   | 385,075     | 385,130          | 383,638     | 383,695     | 384,129   | 384,987   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 405,842        | 406,075        | 405,602        | 405,878          | 405,412        | 405,526        | 406,673        | 405,766        |
| 25             | W, W  | 337,997        | 338,106        | 338,039        | 338,126          | 337,756        | 337,792        | 338,177        | 337,972        |
| 26             | W, AN   | 378,482        | 378,448        | 378,513        | 378,428          | 378,783        | 378,810        | 379,621        | 378,280        |
| 27             | AN, AN  | 401,872        | 401,978        | 402,105        | 402,053          | 401,456        | 401,645        | 402,823        | 402,030        |
| 28             | D, D  | 472,513        | 471,154        | 473,774        | 473,682          | 472,789        | 473,335        | 475,509        | 471,114        |
| 29             | D, D  | 476,752        | 476,059        | 477,109        | 477,173          | 476,371        | 476,798        | 478,032        | 476,232        |
| 30             | AN, BN  | 392,766        | 392,592        | 392,403        | 392,294          | 392,264        | 392,394        | 393,114        | 392,375        |
| 31             | BN, D   | 433,963        | 433,980        | 434,064        | 433,936          | 433,616        | 433,733        | 437,856        | 434,015        |
| 32             | AN, W   | 370,880        | 371,040        | 370,981        | 370,990          | 370,656        | 370,675        | 370,962        | 371,000        |
| 33             | W, W  | 385,791        | 385,748        | 385,620        | 385,744          | 384,844        | 384,786        | 384,878        | 385,829        |
| 34             | D, C  | 445,883        | 446,096        | 445,971        | 446,049          | 446,220        | 446,132        | 450,217        | 445,910        |
| 35             | C, C  | 482,489        | 481,599        | 485,748        | 485,656          | 484,800        | 484,284        | 486,892        | 484,383        |
| 36             | D, BN   | 512,533        | 509,966        | 512,992        | 513,159          | 513,484        | 511,671        | 514,302        | 510,988        |
| 37             | BN, AN  | 430,172        | 429,728        | 430,154        | 430,082          | 429,885        | 430,576        | 430,123        | 429,864        |
| 38             | W, W  | 378,389        | 378,242        | 378,257        | 378,281          | 377,932        | 378,264        | 378,346        | 378,380        |
| 39             | BN, D   | 427,524        | 427,793        | 427,474        | 427,504          | 427,197        | 427,191        | 429,403        | 427,320        |
| 40             | D, C  | 503,373        | 502,196        | 506,337        | 506,393          | 505,999        | 506,077        | 507,075        | 505,398        |
| 41             | C, C  | 541,052        | 539,779        | 541,777        | 541,766          | 541,372        | 540,931        | 553,868        | 541,701        |
| 42             | C, C  | 587,281        | 587,309        | 586,923        | 605,658          | 599,850        | 605,429        | 596,405        | 586,720        |
| <b>Average</b> |   | <b>436,202</b> | <b>435,683</b> | <b>436,704</b> | <b>437,192</b>   | <b>436,581</b> | <b>436,948</b> | <b>438,754</b> | <b>435,567</b> |
| <b>Maximum</b> |   | <b>587,281</b> | <b>587,309</b> | <b>586,923</b> | <b>605,658</b>   | <b>599,850</b> | <b>605,429</b> | <b>596,405</b> | <b>586,720</b> |
| <b>Minimum</b> |   | <b>337,997</b> | <b>338,106</b> | <b>338,039</b> | <b>338,126</b>   | <b>337,756</b> | <b>337,792</b> | <b>338,177</b> | <b>337,972</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-6. Simulated Groundwater Pumping in C2VSimFG Subregion 6 (SR6)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 642,168  | 641,993   | 641,364     | 641,984          | 640,423     | 640,607     | 641,892   | 642,125   |
| 2    | W, W  | 675,336  | 676,134   | 676,619     | 675,886          | 674,654     | 674,162     | 676,229   | 676,548   |
| 3    | C, C  | 800,435  | 800,041   | 800,579     | 800,919          | 798,603     | 796,687     | 801,904   | 800,124   |
| 4    | C, C  | 933,653  | 932,942   | 932,646     | 931,670          | 932,322     | 932,025     | 951,579   | 933,641   |
| 5    | AN, W   | 699,333  | 699,262   | 699,431     | 699,429          | 697,797     | 698,077     | 701,854   | 699,408   |
| 6    | BN, AN  | 683,860  | 683,111   | 684,243     | 684,362          | 681,210     | 682,144     | 683,521   | 682,896   |
| 7    | AN, W   | 654,186  | 653,990   | 653,979     | 654,249          | 652,676     | 653,584     | 654,393   | 653,945   |
| 8    | D, D  | 717,946  | 718,606   | 718,602     | 718,220          | 715,466     | 716,768     | 719,979   | 716,037   |
| 9    | W, W  | 603,185  | 603,952   | 604,000     | 603,994          | 602,875     | 603,117     | 603,420   | 603,940   |
| 10   | W, W  | 592,881  | 592,881   | 592,606     | 592,575          | 591,043     | 590,600     | 592,062   | 592,636   |
| 11   | W, AN   | 702,978  | 700,201   | 702,977     | 702,562          | 701,247     | 701,246     | 702,293   | 703,212   |
| 12   | D, D  | 707,583  | 706,837   | 708,141     | 708,979          | 707,396     | 707,152     | 706,866   | 708,640   |
| 13   | W, W  | 683,402  | 683,122   | 683,840     | 683,273          | 681,827     | 681,324     | 683,094   | 683,409   |
| 14   | D, D  | 745,266  | 748,584   | 744,589     | 744,590          | 741,065     | 741,478     | 749,217   | 743,122   |
| 15   | C, C  | 737,965  | 737,200   | 740,556     | 738,850          | 737,546     | 736,355     | 739,511   | 740,348   |
| 16   | D, C  | 829,020  | 828,070   | 829,063     | 828,429          | 823,689     | 818,746     | 829,186   | 828,191   |
| 17   | C, C  | 799,256  | 796,209   | 793,213     | 794,941          | 792,523     | 790,691     | 798,891   | 794,167   |
| 18   | C, C  | 847,865  | 845,580   | 845,264     | 846,588          | 844,945     | 842,946     | 848,533   | 846,293   |
| 19   | C, C  | 869,868  | 870,929   | 870,969     | 870,867          | 869,322     | 881,509     | 871,584   | 869,494   |
| 20   | AN, W   | 698,158  | 698,625   | 698,393     | 698,302          | 696,358     | 697,897     | 698,595   | 698,463   |
| 21   | C, C  | 801,443  | 801,042   | 803,444     | 803,188          | 798,954     | 796,913     | 808,756   | 801,182   |
| 22   | W, W  | 690,134  | 690,155   | 690,231     | 690,540          | 688,466     | 690,901     | 690,318   | 689,814   |
| 23   | W, W  | 670,266  | 670,659   | 669,600     | 670,562          | 668,800     | 668,801     | 670,447   | 670,286   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 681,571        | 679,700        | 680,755        | 679,959          | 679,227        | 677,601        | 681,312        | 681,308        |
| 25             | W, W  | 608,835        | 609,131        | 608,474        | 609,120          | 607,359        | 607,272        | 608,364        | 609,126        |
| 26             | W, AN   | 637,497        | 636,744        | 637,639        | 637,600          | 634,154        | 634,171        | 636,840        | 637,593        |
| 27             | AN, AN  | 664,934        | 664,869        | 664,450        | 665,259          | 662,708        | 661,862        | 665,007        | 665,213        |
| 28             | D, D  | 680,981        | 680,986        | 681,463        | 681,969          | 678,726        | 678,936        | 681,235        | 681,026        |
| 29             | D, D  | 690,627        | 690,153        | 690,705        | 690,960          | 687,422        | 687,972        | 690,972        | 690,411        |
| 30             | AN, BN  | 668,424        | 672,563        | 670,158        | 669,641          | 664,535        | 664,400        | 671,645        | 669,570        |
| 31             | BN, D   | 701,404        | 702,090        | 702,394        | 702,411          | 700,451        | 700,210        | 701,156        | 701,974        |
| 32             | AN, W   | 655,573        | 655,545        | 655,830        | 655,821          | 654,228        | 655,150        | 655,572        | 655,324        |
| 33             | W, W  | 663,210        | 663,875        | 663,592        | 664,133          | 661,518        | 661,924        | 663,746        | 663,300        |
| 34             | D, C  | 718,170        | 717,285        | 717,453        | 717,508          | 715,438        | 715,807        | 718,033        | 717,539        |
| 35             | C, C  | 717,526        | 717,065        | 719,613        | 718,638          | 715,602        | 716,475        | 720,580        | 718,129        |
| 36             | D, BN   | 827,875        | 825,301        | 828,568        | 829,380          | 809,962        | 806,266        | 830,327        | 828,856        |
| 37             | BN, AN  | 629,274        | 628,742        | 628,974        | 628,987          | 628,005        | 627,808        | 629,063        | 629,115        |
| 38             | W, W  | 632,570        | 633,167        | 632,996        | 632,931          | 630,152        | 630,186        | 631,898        | 633,239        |
| 39             | BN, D   | 754,122        | 753,818        | 753,464        | 754,158          | 749,332        | 749,342        | 754,712        | 754,007        |
| 40             | D, C  | 771,494        | 770,636        | 772,503        | 772,768          | 766,486        | 766,953        | 773,100        | 772,290        |
| 41             | C, C  | 883,023        | 881,050        | 882,190        | 880,941          | 880,152        | 885,421        | 898,174        | 881,667        |
| 42             | C, C  | 846,173        | 847,568        | 847,358        | 848,508          | 844,271        | 842,876        | 863,800        | 846,703        |
| <b>Average</b> |   | <b>719,511</b> | <b>719,296</b> | <b>719,593</b> | <b>719,658</b>   | <b>716,879</b> | <b>717,009</b> | <b>721,420</b> | <b>719,388</b> |
| <b>Maximum</b> |   | <b>933,653</b> | <b>932,942</b> | <b>932,646</b> | <b>931,670</b>   | <b>932,322</b> | <b>932,025</b> | <b>951,579</b> | <b>933,641</b> |
| <b>Minimum</b> |   | <b>592,881</b> | <b>592,881</b> | <b>592,606</b> | <b>592,575</b>   | <b>591,043</b> | <b>590,600</b> | <b>592,062</b> | <b>592,636</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-7. Simulated Groundwater Pumping in C2VSimFG Subregion 7 (SR7)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 348,383  | 348,913   | 349,256     | 349,048          | 349,086     | 349,430     | 347,496   | 348,690   |
| 2    | W, W  | 362,630  | 362,969   | 363,324     | 363,149          | 362,836     | 362,805     | 362,802   | 363,208   |
| 3    | C, C  | 378,183  | 378,161   | 377,767     | 378,623          | 378,005     | 391,088     | 377,753   | 377,993   |
| 4    | C, C  | 424,250  | 424,169   | 411,624     | 411,635          | 411,853     | 423,099     | 422,116   | 419,429   |
| 5    | AN, W   | 374,888  | 388,554   | 373,148     | 373,574          | 374,003     | 374,516     | 375,532   | 374,218   |
| 6    | BN, AN  | 369,480  | 370,199   | 370,477     | 368,210          | 370,902     | 382,639     | 368,422   | 371,023   |
| 7    | AN, W   | 359,796  | 357,342   | 359,903     | 359,936          | 360,741     | 359,641     | 358,746   | 360,763   |
| 8    | D, D  | 385,010  | 385,034   | 384,362     | 384,799          | 384,355     | 397,231     | 383,641   | 384,749   |
| 9    | W, W  | 340,197  | 339,762   | 339,201     | 338,577          | 339,104     | 339,662     | 339,924   | 340,007   |
| 10   | W, W  | 325,645  | 325,204   | 325,282     | 325,022          | 324,822     | 325,755     | 326,432   | 324,968   |
| 11   | W, AN   | 379,806  | 380,537   | 379,817     | 379,090          | 379,006     | 379,785     | 379,629   | 379,097   |
| 12   | D, D  | 389,039  | 389,332   | 389,368     | 389,245          | 389,415     | 389,593     | 386,894   | 389,557   |
| 13   | W, W  | 377,329  | 378,374   | 378,019     | 377,945          | 378,395     | 377,899     | 378,406   | 378,119   |
| 14   | D, D  | 389,311  | 388,912   | 389,453     | 389,692          | 389,004     | 403,548     | 388,314   | 389,626   |
| 15   | C, C  | 384,028  | 383,772   | 383,954     | 384,004          | 383,889     | 396,288     | 384,641   | 383,857   |
| 16   | D, C  | 393,179  | 393,078   | 393,187     | 392,664          | 393,143     | 405,627     | 391,532   | 393,059   |
| 17   | C, C  | 358,227  | 357,302   | 350,920     | 350,335          | 351,330     | 362,968     | 358,078   | 354,440   |
| 18   | C, C  | 383,024  | 385,086   | 372,888     | 372,853          | 372,973     | 384,887     | 383,224   | 379,991   |
| 19   | C, C  | 395,427  | 395,190   | 392,701     | 392,698          | 392,710     | 402,986     | 394,620   | 389,534   |
| 20   | AN, W   | 374,662  | 375,684   | 374,284     | 374,508          | 374,534     | 374,933     | 375,769   | 374,414   |
| 21   | C, C  | 392,540  | 392,523   | 392,342     | 392,326          | 391,993     | 404,146     | 391,597   | 392,809   |
| 22   | W, W  | 376,213  | 375,881   | 374,927     | 375,423          | 376,068     | 375,058     | 374,177   | 376,184   |
| 23   | W, W  | 372,912  | 373,043   | 373,269     | 373,285          | 372,789     | 373,048     | 371,278   | 373,282   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 388,542        | 388,052        | 387,495        | 387,642          | 387,993        | 388,121        | 387,490        | 388,014        |
| 25             | W, W  | 348,528        | 349,416        | 350,727        | 350,840          | 350,968        | 351,290        | 349,031        | 350,775        |
| 26             | W, AN   | 362,041        | 362,769        | 362,704        | 362,825          | 362,460        | 362,496        | 362,488        | 362,594        |
| 27             | AN, AN  | 392,258        | 391,740        | 392,236        | 392,531          | 392,268        | 392,837        | 392,889        | 392,482        |
| 28             | D, D  | 393,199        | 393,102        | 392,246        | 392,738          | 392,763        | 401,491        | 391,644        | 393,027        |
| 29             | D, D  | 397,940        | 397,756        | 397,903        | 397,660          | 397,716        | 396,995        | 396,566        | 397,339        |
| 30             | AN, BN  | 384,031        | 384,004        | 383,529        | 383,341          | 383,945        | 384,404        | 383,236        | 383,855        |
| 31             | BN, D   | 401,596        | 401,426        | 402,006        | 402,043          | 401,617        | 400,548        | 399,457        | 402,015        |
| 32             | AN, W   | 369,532        | 366,799        | 367,086        | 366,385          | 366,429        | 368,005        | 368,584        | 369,279        |
| 33             | W, W  | 379,084        | 377,971        | 378,887        | 378,669          | 379,806        | 378,531        | 378,418        | 378,784        |
| 34             | D, C  | 395,680        | 394,479        | 394,886        | 395,341          | 395,530        | 396,049        | 392,536        | 394,747        |
| 35             | C, C  | 398,442        | 398,004        | 398,712        | 398,801          | 398,667        | 409,541        | 396,320        | 398,570        |
| 36             | D, BN   | 405,704        | 405,565        | 405,277        | 405,222          | 404,759        | 415,471        | 403,609        | 405,411        |
| 37             | BN, AN  | 370,409        | 370,483        | 371,229        | 371,019          | 371,429        | 370,788        | 370,851        | 371,052        |
| 38             | W, W  | 362,254        | 360,664        | 362,725        | 363,227          | 362,013        | 361,777        | 362,444        | 361,866        |
| 39             | BN, D   | 373,717        | 373,831        | 373,845        | 373,889          | 373,949        | 374,084        | 373,262        | 373,926        |
| 40             | D, C  | 392,167        | 391,925        | 392,059        | 391,372          | 392,006        | 392,662        | 391,258        | 392,221        |
| 41             | C, C  | 409,509        | 409,437        | 396,472        | 396,958          | 396,744        | 405,184        | 406,275        | 403,948        |
| 42             | C, C  | 407,829        | 408,422        | 406,305        | 410,844          | 410,850        | 418,550        | 408,990        | 402,800        |
| <b>Average</b> |   | <b>380,158</b> | <b>380,354</b> | <b>378,948</b> | <b>379,000</b>   | <b>379,116</b> | <b>383,463</b> | <b>379,437</b> | <b>379,565</b> |
| <b>Maximum</b> |   | <b>424,250</b> | <b>424,169</b> | <b>411,624</b> | <b>411,635</b>   | <b>411,853</b> | <b>423,099</b> | <b>422,116</b> | <b>419,429</b> |
| <b>Minimum</b> |   | <b>325,645</b> | <b>325,204</b> | <b>325,282</b> | <b>325,022</b>   | <b>324,822</b> | <b>325,755</b> | <b>326,432</b> | <b>324,968</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-8. Simulated Groundwater Pumping in C2VSimFG Subregion 8 (SR8)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)  | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|-----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 838,846   | 839,778   | 838,640     | 838,786          | 838,542     | 838,646     | 869,386   | 838,242   |
| 2    | W, W  | 913,491   | 912,918   | 913,098     | 913,340          | 913,504     | 917,624     | 944,608   | 913,293   |
| 3    | C, C  | 1,145,850 | 1,148,650 | 1,145,655   | 1,145,380        | 1,145,426   | 1,145,495   | 1,150,442 | 1,145,315 |
| 4    | C, C  | 1,176,454 | 1,176,362 | 1,176,424   | 1,176,398        | 1,176,082   | 1,176,454   | 1,176,580 | 1,176,212 |
| 5    | AN, W   | 917,786   | 917,387   | 917,598     | 917,955          | 917,766     | 921,658     | 958,089   | 917,940   |
| 6    | BN, AN  | 915,961   | 915,961   | 916,051     | 915,867          | 914,951     | 919,700     | 951,395   | 915,870   |
| 7    | AN, W   | 845,418   | 845,479   | 845,707     | 845,943          | 845,228     | 849,882     | 887,585   | 845,940   |
| 8    | D, D  | 1,015,965 | 1,015,938 | 1,015,920   | 1,015,737        | 1,015,980   | 1,016,011   | 1,058,606 | 1,015,784 |
| 9    | W, W  | 783,116   | 783,397   | 783,253     | 783,234          | 783,204     | 783,499     | 828,102   | 783,533   |
| 10   | W, W  | 756,213   | 756,200   | 756,268     | 756,316          | 755,914     | 756,184     | 799,499   | 756,238   |
| 11   | W, AN   | 945,213   | 945,171   | 945,188     | 945,306          | 945,272     | 945,690     | 982,428   | 945,162   |
| 12   | D, D  | 975,830   | 975,858   | 975,772     | 975,463          | 976,067     | 975,532     | 1,015,078 | 975,723   |
| 13   | W, W  | 898,604   | 898,386   | 898,718     | 898,626          | 898,564     | 898,670     | 938,704   | 898,555   |
| 14   | D, D  | 1,044,164 | 1,044,096 | 1,043,841   | 1,043,808        | 1,043,976   | 1,044,240   | 1,050,762 | 1,044,187 |
| 15   | C, C  | 1,050,287 | 1,050,566 | 1,050,617   | 1,050,549        | 1,050,155   | 1,050,652   | 1,051,143 | 1,050,244 |
| 16   | D, C  | 1,050,709 | 1,050,719 | 1,050,602   | 1,050,810        | 1,050,858   | 1,050,920   | 1,051,644 | 1,050,826 |
| 17   | C, C  | 1,017,731 | 1,017,334 | 1,017,720   | 1,017,642        | 1,017,565   | 1,017,723   | 1,018,324 | 1,017,666 |
| 18   | C, C  | 1,050,935 | 1,050,632 | 1,050,879   | 1,050,897        | 1,050,946   | 1,050,652   | 1,051,350 | 1,050,998 |
| 19   | C, C  | 1,084,859 | 1,084,391 | 1,084,924   | 1,085,231        | 1,084,762   | 1,085,249   | 1,084,783 | 1,085,079 |
| 20   | AN, W   | 907,481   | 907,407   | 907,552     | 907,419          | 907,532     | 907,419     | 947,394   | 907,322   |
| 21   | C, C  | 1,054,166 | 1,053,396 | 1,053,278   | 1,052,960        | 1,053,083   | 1,053,201   | 1,058,458 | 1,053,242 |
| 22   | W, W  | 880,542   | 880,658   | 880,654     | 880,487          | 880,688     | 880,728     | 921,356   | 880,432   |
| 23   | W, W  | 906,204   | 903,818   | 906,188     | 906,336          | 906,038     | 906,032     | 940,051   | 906,050   |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)         | Alt1 (AF)        | Alt2v1 (AF)      | Alt2v1wTUCP (AF) | Alt2v2 (AF)      | Alt2v3 (AF)      | Alt3 (AF)        | Alt4 (AF)        |
|----------------|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 24             | W, W  | 946,350          | 944,684          | 945,303          | 945,170          | 944,908          | 945,056          | 989,803          | 944,961          |
| 25             | W, W  | 755,779          | 755,629          | 755,813          | 755,666          | 755,978          | 755,908          | 802,416          | 755,664          |
| 26             | W, AN   | 837,913          | 838,023          | 837,975          | 837,887          | 837,185          | 841,892          | 863,846          | 838,016          |
| 27             | AN, AN  | 904,155          | 904,387          | 904,168          | 904,286          | 904,188          | 904,266          | 926,533          | 903,972          |
| 28             | D, D  | 994,099          | 993,870          | 994,238          | 994,206          | 993,965          | 994,116          | 1,029,870        | 993,945          |
| 29             | D, D  | 970,613          | 970,883          | 970,513          | 970,818          | 971,151          | 970,801          | 1,005,553        | 970,810          |
| 30             | AN, BN  | 935,813          | 935,950          | 935,947          | 935,972          | 935,776          | 936,026          | 976,060          | 936,262          |
| 31             | BN, D   | 986,565          | 986,832          | 986,666          | 986,556          | 986,794          | 986,487          | 1,025,061        | 986,474          |
| 32             | AN, W   | 860,242          | 860,287          | 859,416          | 859,755          | 859,955          | 859,646          | 902,506          | 859,838          |
| 33             | W, W  | 885,563          | 886,003          | 884,904          | 884,856          | 884,859          | 884,727          | 928,388          | 884,800          |
| 34             | D, C  | 1,071,839        | 1,072,173        | 1,072,012        | 1,072,171        | 1,072,120        | 1,072,294        | 1,081,494        | 1,072,192        |
| 35             | C, C  | 1,040,564        | 1,040,455        | 1,040,699        | 1,040,269        | 1,040,330        | 1,039,802        | 1,043,379        | 1,040,706        |
| 36             | D, BN   | 990,484          | 990,659          | 990,487          | 990,146          | 990,523          | 990,692          | 1,028,640        | 990,376          |
| 37             | BN, AN  | 823,372          | 823,316          | 823,537          | 823,388          | 823,254          | 823,437          | 857,400          | 823,024          |
| 38             | W, W  | 789,126          | 788,940          | 789,232          | 789,158          | 789,372          | 789,472          | 829,082          | 789,342          |
| 39             | BN, D   | 1,041,624        | 1,042,703        | 1,042,069        | 1,042,137        | 1,042,242        | 1,042,295        | 1,081,780        | 1,042,108        |
| 40             | D, C  | 1,052,415        | 1,052,836        | 1,052,518        | 1,052,875        | 1,052,711        | 1,052,904        | 1,058,603        | 1,052,622        |
| 41             | C, C  | 1,095,802        | 1,095,594        | 1,095,856        | 1,095,906        | 1,095,749        | 1,095,601        | 1,097,137        | 1,095,672        |
| 42             | C, C  | 1,078,711        | 1,078,828        | 1,078,951        | 1,078,700        | 1,078,469        | 1,078,725        | 1,079,356        | 1,078,900        |
| <b>Average</b> |   | <b>958,020</b>   | <b>958,013</b>   | <b>957,973</b>   | <b>957,962</b>   | <b>957,896</b>   | <b>958,476</b>   | <b>984,349</b>   | <b>957,941</b>   |
| <b>Maximum</b> |   | <b>1,176,454</b> | <b>1,176,362</b> | <b>1,176,424</b> | <b>1,176,398</b> | <b>1,176,082</b> | <b>1,176,454</b> | <b>1,176,580</b> | <b>1,176,212</b> |
| <b>Minimum</b> |   | <b>755,779</b>   | <b>755,629</b>   | <b>755,813</b>   | <b>755,666</b>   | <b>755,914</b>   | <b>755,908</b>   | <b>799,499</b>   | <b>755,664</b>   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-9. Simulated Groundwater Pumping in C2VSimFG Subregion 9 (SR9)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 454,604  | 453,420   | 454,945     | 454,935          | 455,012     | 455,091     | 466,710   | 454,684   |
| 2    | W, W  | 494,210  | 490,214   | 493,386     | 493,073          | 495,021     | 494,813     | 507,330   | 490,528   |
| 3    | C, C  | 524,040  | 522,994   | 524,819     | 525,145          | 525,674     | 525,032     | 531,141   | 523,614   |
| 4    | C, C  | 569,426  | 569,084   | 570,084     | 569,729          | 570,215     | 569,869     | 570,080   | 569,804   |
| 5    | AN, W   | 527,646  | 520,473   | 527,592     | 527,698          | 529,562     | 529,577     | 540,640   | 527,410   |
| 6    | BN, AN  | 538,586  | 534,829   | 538,287     | 538,524          | 539,671     | 539,814     | 549,503   | 535,719   |
| 7    | AN, W   | 494,272  | 493,623   | 493,881     | 493,876          | 495,928     | 495,868     | 506,378   | 493,458   |
| 8    | D, D  | 546,880  | 540,603   | 546,921     | 547,144          | 549,142     | 548,884     | 559,933   | 546,835   |
| 9    | W, W  | 460,716  | 459,611   | 460,941     | 460,945          | 461,075     | 461,084     | 473,679   | 460,719   |
| 10   | W, W  | 424,160  | 424,048   | 424,053     | 424,019          | 424,467     | 424,530     | 435,184   | 424,073   |
| 11   | W, AN   | 542,082  | 541,081   | 541,223     | 541,092          | 541,496     | 541,492     | 556,272   | 540,959   |
| 12   | D, D  | 558,320  | 556,387   | 558,778     | 558,715          | 560,263     | 560,181     | 569,157   | 558,471   |
| 13   | W, W  | 492,535  | 491,570   | 492,761     | 492,750          | 493,048     | 492,888     | 507,315   | 492,058   |
| 14   | D, D  | 538,480  | 535,995   | 539,114     | 539,148          | 540,129     | 540,097     | 546,858   | 538,424   |
| 15   | C, C  | 539,956  | 537,302   | 542,276     | 542,247          | 541,617     | 542,582     | 544,134   | 542,061   |
| 16   | D, C  | 553,216  | 551,966   | 554,878     | 554,765          | 556,422     | 554,868     | 559,785   | 555,258   |
| 17   | C, C  | 506,628  | 503,358   | 506,724     | 505,665          | 505,564     | 505,379     | 509,201   | 506,786   |
| 18   | C, C  | 535,943  | 533,515   | 535,831     | 534,657          | 534,667     | 534,967     | 538,089   | 535,887   |
| 19   | C, C  | 564,375  | 560,146   | 563,822     | 563,773          | 562,292     | 562,894     | 563,756   | 564,239   |
| 20   | AN, W   | 506,923  | 501,796   | 503,275     | 503,410          | 504,872     | 504,638     | 518,769   | 502,339   |
| 21   | C, C  | 569,648  | 565,662   | 571,506     | 571,721          | 571,467     | 572,156     | 580,229   | 569,627   |
| 22   | W, W  | 515,307  | 514,185   | 516,202     | 516,292          | 515,789     | 516,121     | 531,582   | 515,312   |
| 23   | W, W  | 528,739  | 528,608   | 528,685     | 528,865          | 529,123     | 528,988     | 544,654   | 528,779   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 515,779        | 511,758        | 512,917        | 512,991          | 512,501        | 512,592        | 527,016        | 512,737        |
| 25             | W, W  | 464,606        | 464,528        | 464,540        | 464,602          | 464,745        | 464,651        | 476,048        | 464,553        |
| 26             | W, AN   | 479,112        | 478,805        | 478,842        | 478,804          | 478,797        | 478,864        | 491,956        | 478,537        |
| 27             | AN, AN  | 522,518        | 517,387        | 521,889        | 521,931          | 524,418        | 524,332        | 535,706        | 518,581        |
| 28             | D, D  | 547,827        | 543,084        | 548,475        | 548,408          | 550,427        | 550,047        | 556,361        | 547,100        |
| 29             | D, D  | 536,355        | 533,920        | 536,917        | 536,782          | 538,622        | 538,540        | 546,875        | 536,880        |
| 30             | AN, BN  | 500,491        | 496,538        | 500,385        | 500,438          | 502,848        | 502,674        | 512,307        | 501,026        |
| 31             | BN, D   | 548,099        | 539,528        | 547,233        | 546,951          | 549,182        | 549,257        | 557,351        | 546,706        |
| 32             | AN, W   | 485,479        | 483,989        | 485,124        | 485,000          | 486,809        | 486,796        | 499,818        | 484,939        |
| 33             | W, W  | 512,581        | 512,303        | 512,244        | 512,308          | 512,352        | 512,302        | 522,868        | 512,200        |
| 34             | D, C  | 544,458        | 542,874        | 544,423        | 544,411          | 546,204        | 546,225        | 550,282        | 544,853        |
| 35             | C, C  | 537,481        | 535,480        | 538,462        | 538,438          | 540,201        | 539,906        | 544,390        | 538,773        |
| 36             | D, BN   | 535,858        | 534,045        | 536,076        | 535,956          | 537,291        | 537,473        | 539,644        | 536,999        |
| 37             | BN, AN  | 476,858        | 475,892        | 477,393        | 477,263          | 479,124        | 479,058        | 484,813        | 476,868        |
| 38             | W, W  | 485,345        | 485,040        | 485,306        | 485,306          | 485,464        | 485,470        | 493,850        | 485,112        |
| 39             | BN, D   | 563,449        | 562,493        | 562,521        | 562,519          | 563,776        | 563,764        | 574,516        | 562,678        |
| 40             | D, C  | 578,128        | 577,408        | 580,728        | 580,722          | 581,233        | 582,691        | 587,154        | 579,846        |
| 41             | C, C  | 558,440        | 558,073        | 558,691        | 558,570          | 558,663        | 558,621        | 561,314        | 558,829        |
| 42             | C, C  | 539,978        | 538,972        | 539,879        | 538,879          | 538,829        | 538,751        | 539,880        | 539,786        |
| <b>Average</b> |   | <b>521,894</b> | <b>519,585</b> | <b>521,953</b> | <b>521,868</b>   | <b>522,714</b> | <b>522,710</b> | <b>531,251</b> | <b>521,525</b> |
| <b>Maximum</b> |   | <b>578,128</b> | <b>577,408</b> | <b>580,728</b> | <b>580,722</b>   | <b>581,233</b> | <b>582,691</b> | <b>587,154</b> | <b>579,846</b> |
| <b>Minimum</b> |   | <b>424,160</b> | <b>424,048</b> | <b>424,053</b> | <b>424,019</b>   | <b>424,467</b> | <b>424,530</b> | <b>435,184</b> | <b>424,073</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-10. Simulated Groundwater Pumping in C2VSimFG Subregion 10 (SR10)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 288,610  | 271,068   | 301,321     | 301,321          | 301,460     | 301,420     | 438,180   | 286,637   |
| 2    | W, W  | 370,367  | 315,541   | 356,853     | 356,971          | 385,651     | 385,712     | 542,246   | 326,335   |
| 3    | C, C  | 517,362  | 496,258   | 527,356     | 526,815          | 536,030     | 528,528     | 584,428   | 503,508   |
| 4    | C, C  | 810,852  | 707,587   | 788,134     | 710,666          | 714,323     | 712,874     | 1,048,950 | 777,930   |
| 5    | AN, W   | 370,347  | 368,190   | 368,337     | 368,039          | 394,961     | 395,445     | 549,484   | 367,756   |
| 6    | BN, AN  | 403,761  | 358,630   | 398,563     | 403,711          | 417,507     | 421,637     | 524,316   | 369,617   |
| 7    | AN, W   | 303,391  | 291,065   | 300,790     | 301,933          | 330,835     | 332,549     | 448,869   | 291,792   |
| 8    | D, D  | 442,754  | 367,845   | 447,182     | 447,205          | 469,961     | 469,060     | 704,402   | 443,962   |
| 9    | W, W  | 297,306  | 279,530   | 298,150     | 297,944          | 297,768     | 298,219     | 479,395   | 298,264   |
| 10   | W, W  | 234,437  | 233,924   | 234,696     | 234,344          | 234,514     | 234,484     | 367,107   | 234,437   |
| 11   | W, AN   | 306,782  | 298,064   | 299,074     | 299,124          | 299,331     | 299,146     | 467,909   | 295,400   |
| 12   | D, D  | 445,981  | 422,157   | 449,793     | 449,659          | 469,759     | 470,012     | 581,819   | 445,995   |
| 13   | W, W  | 313,466  | 307,575   | 317,445     | 317,413          | 321,253     | 320,314     | 487,954   | 312,020   |
| 14   | D, D  | 454,815  | 424,366   | 464,650     | 464,288          | 477,050     | 476,514     | 552,020   | 452,941   |
| 15   | C, C  | 525,185  | 491,193   | 554,529     | 554,516          | 541,950     | 557,842     | 800,729   | 551,829   |
| 16   | D, C  | 542,764  | 522,695   | 550,039     | 551,126          | 573,305     | 558,040     | 801,681   | 556,038   |
| 17   | C, C  | 616,758  | 577,118   | 618,080     | 607,235          | 601,858     | 603,554     | 673,154   | 619,450   |
| 18   | C, C  | 769,005  | 739,925   | 756,440     | 751,162          | 747,907     | 750,199     | 831,272   | 756,765   |
| 19   | C, C  | 754,037  | 730,659   | 754,761     | 754,622          | 734,901     | 741,893     | 757,929   | 755,143   |
| 20   | AN, W   | 418,056  | 372,624   | 377,756     | 379,900          | 408,333     | 405,031     | 568,887   | 371,252   |
| 21   | C, C  | 552,022  | 501,360   | 575,621     | 578,818          | 575,947     | 582,804     | 665,386   | 551,400   |
| 22   | W, W  | 341,044  | 331,391   | 349,975     | 350,477          | 346,669     | 349,241     | 516,682   | 343,000   |
| 23   | W, W  | 316,678  | 315,266   | 318,315     | 318,274          | 318,412     | 317,947     | 504,246   | 312,909   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)        | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|------------------|----------------|
| 24             | W, W  | 308,876        | 271,069        | 300,919        | 300,594          | 298,012        | 297,512        | 445,370          | 298,738        |
| 25             | W, W  | 239,527        | 239,215        | 239,576        | 239,486          | 240,087        | 239,810        | 382,839          | 239,321        |
| 26             | W, AN   | 282,778        | 278,891        | 279,823        | 279,789          | 279,804        | 279,619        | 447,829          | 275,739        |
| 27             | AN, AN  | 395,316        | 331,256        | 388,126        | 388,336          | 423,803        | 424,423        | 557,484          | 345,255        |
| 28             | D, D  | 462,908        | 403,495        | 468,437        | 469,145          | 490,453        | 487,780        | 551,743          | 454,172        |
| 29             | D, D  | 468,422        | 439,629        | 478,728        | 478,887          | 494,139        | 493,325        | 758,339          | 474,659        |
| 30             | AN, BN  | 429,488        | 386,164        | 429,535        | 429,525          | 456,227        | 454,527        | 634,430          | 436,147        |
| 31             | BN, D   | 469,243        | 380,869        | 465,694        | 463,478          | 492,055        | 492,148        | 576,809          | 461,675        |
| 32             | AN, W   | 303,951        | 284,095        | 298,620        | 298,159          | 320,753        | 320,418        | 471,208          | 296,274        |
| 33             | W, W  | 290,226        | 284,141        | 286,629        | 286,710          | 287,493        | 287,366        | 429,563          | 285,446        |
| 34             | D, C  | 417,894        | 379,333        | 412,851        | 412,820          | 435,054        | 434,708        | 514,895          | 417,795        |
| 35             | C, C  | 484,183        | 461,851        | 496,963        | 497,203          | 516,974        | 513,042        | 816,390          | 501,580        |
| 36             | D, BN   | 566,524        | 546,200        | 568,099        | 569,042          | 584,829        | 587,508        | 703,696          | 580,562        |
| 37             | BN, AN  | 431,938        | 412,568        | 438,937        | 438,723          | 455,948        | 454,640        | 527,426          | 427,118        |
| 38             | W, W  | 287,500        | 282,226        | 289,040        | 288,766          | 291,154        | 290,555        | 421,036          | 284,807        |
| 39             | BN, D   | 380,899        | 354,074        | 358,336        | 357,054          | 378,477        | 378,330        | 538,037          | 363,294        |
| 40             | D, C  | 452,025        | 437,864        | 475,313        | 474,680          | 482,168        | 496,324        | 562,946          | 470,045        |
| 41             | C, C  | 769,488        | 694,519        | 730,285        | 705,493          | 705,549        | 705,348        | 800,167          | 720,889        |
| 42             | C, C  | 719,870        | 713,809        | 718,354        | 706,072          | 705,222        | 705,614        | 776,719          | 718,798        |
| <b>Average</b> |   | <b>441,829</b> | <b>412,031</b> | <b>441,241</b> | <b>438,322</b>   | <b>448,521</b> | <b>448,940</b> | <b>590,809</b>   | <b>435,159</b> |
| <b>Maximum</b> |   | <b>810,852</b> | <b>739,925</b> | <b>788,134</b> | <b>754,622</b>   | <b>747,907</b> | <b>750,199</b> | <b>1,048,950</b> | <b>777,930</b> |
| <b>Minimum</b> |   | <b>234,437</b> | <b>233,924</b> | <b>234,696</b> | <b>234,344</b>   | <b>234,514</b> | <b>234,484</b> | <b>367,107</b>   | <b>234,437</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-11. Simulated Groundwater Pumping in C2VSimFG Subregion 11 (SR11)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 298,907  | 298,889   | 298,883     | 298,897          | 298,907     | 298,897     | 298,817   | 298,889   |
| 2    | W, W  | 301,848  | 301,839   | 301,846     | 301,841          | 301,844     | 301,845     | 302,126   | 301,845   |
| 3    | C, C  | 419,047  | 405,560   | 415,851     | 415,783          | 415,859     | 415,842     | 434,634   | 415,643   |
| 4    | C, C  | 585,807  | 580,342   | 585,596     | 585,522          | 585,479     | 585,745     | 609,435   | 585,674   |
| 5    | AN, W   | 386,007  | 386,072   | 386,021     | 386,001          | 385,993     | 386,020     | 387,447   | 385,975   |
| 6    | BN, AN  | 338,769  | 338,728   | 338,773     | 338,762          | 338,765     | 338,808     | 338,775   | 338,766   |
| 7    | AN, W   | 300,535  | 312,984   | 300,540     | 300,546          | 300,549     | 300,619     | 300,614   | 300,541   |
| 8    | D, D  | 350,199  | 346,885   | 346,902     | 346,919          | 346,915     | 346,926     | 350,187   | 346,910   |
| 9    | W, W  | 269,656  | 269,661   | 269,584     | 269,595          | 269,607     | 269,608     | 271,939   | 269,591   |
| 10   | W, W  | 273,632  | 273,646   | 273,650     | 273,623          | 273,615     | 273,632     | 274,449   | 273,639   |
| 11   | W, AN   | 350,630  | 350,596   | 350,660     | 350,652          | 350,652     | 350,635     | 340,136   | 350,649   |
| 12   | D, D  | 338,436  | 338,434   | 338,421     | 338,419          | 338,429     | 338,426     | 338,375   | 338,432   |
| 13   | W, W  | 318,668  | 318,662   | 318,708     | 318,699          | 318,708     | 318,709     | 320,526   | 318,671   |
| 14   | D, D  | 376,777  | 376,748   | 376,756     | 376,751          | 376,759     | 376,756     | 390,850   | 376,757   |
| 15   | C, C  | 450,244  | 450,655   | 450,231     | 450,201          | 450,196     | 450,182     | 468,320   | 450,190   |
| 16   | D, C  | 432,033  | 432,006   | 432,091     | 432,059          | 431,948     | 432,055     | 433,382   | 432,040   |
| 17   | C, C  | 391,625  | 391,749   | 391,552     | 391,484          | 391,512     | 391,482     | 398,320   | 391,497   |
| 18   | C, C  | 396,410  | 396,522   | 396,616     | 396,277          | 396,363     | 396,604     | 401,692   | 396,402   |
| 19   | C, C  | 399,863  | 399,539   | 399,616     | 399,512          | 399,644     | 399,730     | 404,800   | 399,412   |
| 20   | AN, W   | 341,600  | 335,059   | 338,144     | 339,306          | 338,773     | 337,681     | 344,920   | 340,146   |
| 21   | C, C  | 391,551  | 392,901   | 392,075     | 392,089          | 392,242     | 391,869     | 396,121   | 391,796   |
| 22   | W, W  | 294,582  | 293,537   | 294,995     | 294,819          | 294,925     | 295,038     | 293,515   | 294,785   |
| 23   | W, W  | 325,913  | 326,906   | 326,055     | 326,137          | 325,983     | 326,125     | 324,984   | 326,078   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 322,332        | 332,429        | 332,213        | 332,217          | 332,054        | 332,156        | 319,738        | 331,998        |
| 25             | W, W  | 248,630        | 256,229        | 256,240        | 256,248          | 256,212        | 256,124        | 248,993        | 256,203        |
| 26             | W, AN   | 304,984        | 304,781        | 304,989        | 304,906          | 304,984        | 305,080        | 297,868        | 305,007        |
| 27             | AN, AN  | 323,679        | 323,729        | 323,680        | 323,675          | 323,619        | 323,701        | 323,971        | 323,710        |
| 28             | D, D  | 335,945        | 336,101        | 336,087        | 335,995          | 336,081        | 336,056        | 336,844        | 336,049        |
| 29             | D, D  | 343,425        | 343,448        | 343,517        | 343,549          | 343,539        | 343,450        | 345,462        | 343,460        |
| 30             | AN, BN  | 316,779        | 316,876        | 316,831        | 316,857          | 316,886        | 316,818        | 324,518        | 316,889        |
| 31             | BN, D   | 329,867        | 329,806        | 329,872        | 329,916          | 329,852        | 329,771        | 331,919        | 329,516        |
| 32             | AN, W   | 266,943        | 266,954        | 279,304        | 279,253          | 279,237        | 279,236        | 266,801        | 279,218        |
| 33             | W, W  | 286,574        | 286,728        | 286,810        | 286,811          | 286,696        | 286,705        | 277,852        | 286,750        |
| 34             | D, C  | 374,000        | 375,988        | 373,994        | 373,966          | 374,012        | 373,930        | 378,136        | 373,939        |
| 35             | C, C  | 410,373        | 409,986        | 410,352        | 410,306          | 410,206        | 410,412        | 412,081        | 410,438        |
| 36             | D, BN   | 365,981        | 365,850        | 366,023        | 365,902          | 365,962        | 365,751        | 368,569        | 365,856        |
| 37             | BN, AN  | 280,372        | 280,275        | 280,329        | 280,365          | 280,235        | 280,357        | 280,671        | 280,181        |
| 38             | W, W  | 273,752        | 278,091        | 273,772        | 273,779          | 273,742        | 273,807        | 275,506        | 273,739        |
| 39             | BN, D   | 359,615        | 359,401        | 359,372        | 359,416          | 359,255        | 359,523        | 358,718        | 359,715        |
| 40             | D, C  | 401,487        | 401,556        | 401,671        | 401,812          | 401,801        | 401,892        | 402,455        | 401,767        |
| 41             | C, C  | 485,249        | 484,832        | 485,745        | 485,215          | 484,780        | 485,040        | 502,033        | 485,077        |
| 42             | C, C  | 456,241        | 456,053        | 455,987        | 456,147          | 456,239        | 455,840        | 474,514        | 456,192        |
| <b>Average</b> |   | <b>352,833</b> | <b>353,025</b> | <b>353,342</b> | <b>353,339</b>   | <b>353,311</b> | <b>353,307</b> | <b>355,976</b> | <b>353,334</b> |
| <b>Maximum</b> |   | <b>585,807</b> | <b>580,342</b> | <b>585,596</b> | <b>585,522</b>   | <b>585,479</b> | <b>585,745</b> | <b>609,435</b> | <b>585,674</b> |
| <b>Minimum</b> |   | <b>248,630</b> | <b>256,229</b> | <b>256,240</b> | <b>256,248</b>   | <b>256,212</b> | <b>256,124</b> | <b>248,993</b> | <b>256,203</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-12. Simulated Groundwater Pumping in C2VSimFG Subregion 12 (SR12)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 492,905  | 492,880   | 492,949     | 492,935          | 493,003     | 492,962     | 493,974   | 492,934   |
| 2    | W, W  | 425,844  | 425,754   | 425,769     | 425,873          | 425,853     | 425,998     | 426,899   | 425,902   |
| 3    | C, C  | 649,275  | 649,206   | 649,262     | 649,259          | 649,297     | 649,280     | 649,981   | 649,282   |
| 4    | C, C  | 778,614  | 778,497   | 778,886     | 778,310          | 778,516     | 778,697     | 778,895   | 778,832   |
| 5    | AN, W   | 696,273  | 696,378   | 696,351     | 696,358          | 696,350     | 696,318     | 696,358   | 696,379   |
| 6    | BN, AN  | 557,643  | 557,605   | 557,639     | 557,605          | 557,607     | 557,649     | 557,624   | 557,621   |
| 7    | AN, W   | 496,278  | 496,266   | 496,205     | 496,343          | 496,204     | 496,308     | 496,328   | 496,355   |
| 8    | D, D  | 574,120  | 573,932   | 574,114     | 574,132          | 574,131     | 574,131     | 574,042   | 574,049   |
| 9    | W, W  | 374,746  | 374,658   | 374,637     | 374,773          | 374,858     | 374,670     | 374,813   | 374,764   |
| 10   | W, W  | 431,041  | 431,030   | 430,899     | 430,929          | 431,057     | 430,884     | 431,312   | 430,952   |
| 11   | W, AN   | 555,733  | 555,552   | 555,706     | 555,662          | 555,748     | 555,590     | 555,842   | 555,486   |
| 12   | D, D  | 572,110  | 572,136   | 571,866     | 571,781          | 571,859     | 571,693     | 572,362   | 571,844   |
| 13   | W, W  | 511,202  | 511,216   | 511,289     | 511,193          | 511,297     | 511,295     | 511,375   | 511,237   |
| 14   | D, D  | 603,982  | 603,912   | 603,915     | 603,930          | 603,979     | 603,942     | 604,431   | 603,942   |
| 15   | C, C  | 748,480  | 748,612   | 748,323     | 748,423          | 748,559     | 748,261     | 748,808   | 748,157   |
| 16   | D, C  | 809,042  | 809,063   | 809,298     | 809,254          | 808,972     | 809,249     | 809,274   | 809,176   |
| 17   | C, C  | 724,661  | 724,421   | 724,389     | 724,377          | 724,276     | 724,192     | 724,464   | 724,644   |
| 18   | C, C  | 744,591  | 744,429   | 744,435     | 744,414          | 744,404     | 744,366     | 744,841   | 744,496   |
| 19   | C, C  | 755,720  | 755,483   | 755,448     | 755,609          | 755,667     | 755,693     | 755,714   | 755,476   |
| 20   | AN, W   | 607,303  | 587,997   | 597,035     | 600,372          | 598,913     | 595,777     | 613,420   | 603,021   |
| 21   | C, C  | 700,516  | 704,897   | 703,084     | 702,404          | 702,664     | 703,321     | 699,953   | 701,742   |
| 22   | W, W  | 438,738  | 440,498   | 439,892     | 439,549          | 439,448     | 439,685     | 438,258   | 439,140   |
| 23   | W, W  | 511,922  | 511,844   | 511,918     | 511,917          | 511,922     | 511,646     | 511,897   | 511,847   |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 525,576        | 525,580        | 525,565        | 525,564          | 525,551        | 525,555        | 525,563        | 525,579        |
| 25             | W, W  | 366,181        | 366,108        | 366,220        | 366,186          | 366,222        | 366,086        | 366,011        | 366,040        |
| 26             | W, AN   | 473,773        | 473,714        | 473,744        | 473,778          | 473,710        | 473,778        | 473,778        | 473,778        |
| 27             | AN, AN  | 516,040        | 515,966        | 515,975        | 516,116          | 515,936        | 516,134        | 515,987        | 516,093        |
| 28             | D, D  | 557,747        | 557,688        | 557,746        | 557,708          | 557,678        | 557,778        | 557,318        | 557,703        |
| 29             | D, D  | 568,057        | 567,981        | 568,019        | 567,997          | 567,980        | 568,024        | 568,138        | 568,006        |
| 30             | AN, BN  | 524,544        | 524,573        | 524,627        | 524,679          | 524,691        | 524,588        | 547,362        | 524,631        |
| 31             | BN, D   | 545,046        | 544,930        | 544,946        | 545,057          | 545,075        | 544,930        | 550,944        | 544,974        |
| 32             | AN, W   | 395,609        | 395,837        | 395,583        | 395,581          | 395,842        | 395,728        | 395,720        | 395,544        |
| 33             | W, W  | 407,581        | 407,581        | 407,601        | 407,601          | 407,601        | 407,601        | 407,448        | 407,569        |
| 34             | D, C  | 621,578        | 621,502        | 621,524        | 621,575          | 621,600        | 621,522        | 621,976        | 621,565        |
| 35             | C, C  | 752,216        | 752,236        | 752,322        | 752,174          | 752,334        | 752,316        | 752,168        | 752,312        |
| 36             | D, BN   | 617,869        | 617,768        | 617,613        | 617,715          | 617,812        | 617,854        | 623,227        | 617,808        |
| 37             | BN, AN  | 463,640        | 463,675        | 463,678        | 463,723          | 463,627        | 463,683        | 464,709        | 463,406        |
| 38             | W, W  | 378,022        | 378,065        | 378,051        | 378,055          | 378,065        | 378,051        | 378,029        | 378,051        |
| 39             | BN, D   | 562,176        | 562,098        | 562,218        | 562,218          | 561,905        | 561,900        | 561,735        | 562,216        |
| 40             | D, C  | 751,075        | 750,983        | 750,963        | 751,107          | 750,934        | 751,003        | 750,979        | 751,109        |
| 41             | C, C  | 825,230        | 824,777        | 824,742        | 824,758          | 824,783        | 825,014        | 825,114        | 824,433        |
| 42             | C, C  | 765,401        | 765,865        | 765,561        | 765,708          | 765,279        | 765,595        | 765,756        | 765,572        |
| <b>Average</b> |   | <b>580,431</b> | <b>580,076</b> | <b>580,238</b> | <b>580,303</b>   | <b>580,267</b> | <b>580,208</b> | <b>581,496</b> | <b>580,325</b> |
| <b>Maximum</b> |   | <b>825,230</b> | <b>824,777</b> | <b>824,742</b> | <b>824,758</b>   | <b>824,783</b> | <b>825,014</b> | <b>825,114</b> | <b>824,433</b> |
| <b>Minimum</b> |   | <b>366,181</b> | <b>366,108</b> | <b>366,220</b> | <b>366,186</b>   | <b>366,222</b> | <b>366,086</b> | <b>366,011</b> | <b>366,040</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-13. Simulated Groundwater Pumping in C2VSimFG Subregion 13 (SR13)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)  | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|-----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 1,733,066 | 1,733,567 | 1,733,425   | 1,732,989        | 1,732,962   | 1,733,191   | 1,733,989 | 1,733,371 |
| 2    | W, W  | 1,811,247 | 1,810,828 | 1,811,054   | 1,810,857        | 1,811,043   | 1,810,852   | 1,811,492 | 1,810,678 |
| 3    | C, C  | 2,069,434 | 2,069,200 | 2,069,355   | 2,069,347        | 2,069,393   | 2,069,097   | 2,070,238 | 2,069,017 |
| 4    | C, C  | 2,340,312 | 2,331,083 | 2,338,072   | 2,330,710        | 2,329,844   | 2,330,710   | 2,361,123 | 2,337,069 |
| 5    | AN, W   | 1,739,078 | 1,738,305 | 1,739,291   | 1,739,431        | 1,726,985   | 1,726,890   | 1,750,396 | 1,738,864 |
| 6    | BN, AN  | 1,791,400 | 1,791,603 | 1,791,624   | 1,791,423        | 1,791,467   | 1,791,742   | 1,791,970 | 1,791,628 |
| 7    | AN, W   | 1,703,190 | 1,703,117 | 1,703,194   | 1,703,327        | 1,702,682   | 1,702,738   | 1,703,678 | 1,703,231 |
| 8    | D, D  | 1,972,255 | 1,972,060 | 1,972,544   | 1,972,257        | 1,972,746   | 1,972,498   | 1,984,154 | 1,972,401 |
| 9    | W, W  | 1,501,459 | 1,501,019 | 1,501,287   | 1,501,400        | 1,501,770   | 1,501,585   | 1,507,443 | 1,501,464 |
| 10   | W, W  | 1,331,479 | 1,331,516 | 1,331,440   | 1,331,630        | 1,331,236   | 1,331,563   | 1,332,672 | 1,331,611 |
| 11   | W, AN   | 1,986,204 | 1,986,164 | 1,986,049   | 1,986,302        | 1,989,542   | 1,989,545   | 1,986,891 | 1,986,354 |
| 12   | D, D  | 2,030,046 | 2,028,639 | 2,029,934   | 2,029,875        | 2,025,824   | 2,026,023   | 2,034,779 | 2,029,306 |
| 13   | W, W  | 1,725,417 | 1,725,520 | 1,725,590   | 1,725,151        | 1,725,424   | 1,725,180   | 1,725,696 | 1,725,409 |
| 14   | D, D  | 1,943,438 | 1,943,120 | 1,943,199   | 1,943,323        | 1,943,112   | 1,943,329   | 1,943,767 | 1,943,430 |
| 15   | C, C  | 2,056,598 | 2,056,077 | 2,056,817   | 2,056,811        | 2,056,551   | 2,055,638   | 2,081,906 | 2,056,762 |
| 16   | D, C  | 2,221,730 | 2,221,676 | 2,221,817   | 2,221,681        | 2,222,021   | 2,221,973   | 2,240,028 | 2,222,562 |
| 17   | C, C  | 2,032,937 | 2,032,138 | 2,031,882   | 2,032,415        | 2,031,986   | 2,031,936   | 2,037,135 | 2,032,394 |
| 18   | C, C  | 2,150,734 | 2,149,916 | 2,149,476   | 2,148,851        | 2,148,810   | 2,148,058   | 2,154,912 | 2,149,292 |
| 19   | C, C  | 2,100,438 | 2,100,701 | 2,100,883   | 2,100,452        | 2,099,402   | 2,100,404   | 2,101,611 | 2,100,502 |
| 20   | AN, W   | 1,702,614 | 1,702,935 | 1,702,583   | 1,702,425        | 1,702,046   | 1,702,321   | 1,699,480 | 1,702,647 |
| 21   | C, C  | 1,967,646 | 1,968,258 | 1,967,161   | 1,967,959        | 1,967,035   | 1,967,723   | 1,971,280 | 1,967,780 |
| 22   | W, W  | 1,647,889 | 1,647,908 | 1,648,042   | 1,647,755        | 1,648,362   | 1,648,043   | 1,648,419 | 1,648,020 |
| 23   | W, W  | 1,953,232 | 1,953,401 | 1,953,554   | 1,953,611        | 1,953,445   | 1,953,728   | 1,953,922 | 1,953,646 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)         | Alt1 (AF)        | Alt2v1 (AF)      | Alt2v1wTUCP (AF) | Alt2v2 (AF)      | Alt2v3 (AF)      | Alt3 (AF)        | Alt4 (AF)        |
|----------------|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 24             | W, W  | 1,736,133        | 1,735,863        | 1,735,991        | 1,736,227        | 1,735,644        | 1,735,590        | 1,737,484        | 1,735,788        |
| 25             | W, W  | 1,419,691        | 1,419,279        | 1,419,198        | 1,419,620        | 1,419,424        | 1,419,213        | 1,422,591        | 1,419,390        |
| 26             | W, AN   | 1,705,351        | 1,705,133        | 1,705,118        | 1,705,342        | 1,705,264        | 1,705,511        | 1,705,760        | 1,705,531        |
| 27             | AN, AN  | 1,789,529        | 1,789,376        | 1,789,496        | 1,789,586        | 1,789,652        | 1,789,150        | 1,790,313        | 1,789,553        |
| 28             | D, D  | 1,949,143        | 1,948,855        | 1,949,561        | 1,949,526        | 1,949,454        | 1,949,324        | 1,950,496        | 1,949,218        |
| 29             | D, D  | 2,041,916        | 2,041,172        | 2,041,223        | 2,041,299        | 2,040,901        | 2,041,374        | 2,058,820        | 2,041,537        |
| 30             | AN, BN  | 1,871,437        | 1,870,633        | 1,871,906        | 1,871,086        | 1,871,352        | 1,870,683        | 1,873,545        | 1,871,166        |
| 31             | BN, D   | 1,948,768        | 1,951,005        | 1,948,335        | 1,948,033        | 1,947,980        | 1,948,035        | 1,944,644        | 1,949,269        |
| 32             | AN, W   | 1,436,692        | 1,436,555        | 1,436,064        | 1,436,428        | 1,435,812        | 1,435,318        | 1,433,327        | 1,436,545        |
| 33             | W, W  | 1,531,351        | 1,527,499        | 1,530,867        | 1,530,826        | 1,531,284        | 1,531,556        | 1,530,307        | 1,530,922        |
| 34             | D, C  | 2,019,915        | 2,020,037        | 2,020,151        | 2,020,024        | 2,019,551        | 2,020,109        | 2,018,538        | 2,020,012        |
| 35             | C, C  | 1,913,952        | 1,914,422        | 1,913,694        | 1,913,451        | 1,913,710        | 1,913,617        | 1,935,726        | 1,914,288        |
| 36             | D, BN   | 1,955,363        | 1,956,372        | 1,955,675        | 1,955,462        | 1,954,564        | 1,954,864        | 1,955,784        | 1,955,514        |
| 37             | BN, AN  | 1,599,550        | 1,600,664        | 1,598,963        | 1,599,521        | 1,598,757        | 1,598,911        | 1,593,526        | 1,600,353        |
| 38             | W, W  | 1,454,393        | 1,454,463        | 1,454,830        | 1,454,754        | 1,454,348        | 1,454,709        | 1,455,226        | 1,454,546        |
| 39             | BN, D   | 2,016,346        | 2,016,649        | 2,016,120        | 2,016,425        | 2,016,049        | 2,015,930        | 2,016,367        | 2,016,262        |
| 40             | D, C  | 2,094,503        | 2,093,957        | 2,094,066        | 2,094,302        | 2,093,032        | 2,093,364        | 2,091,028        | 2,093,669        |
| 41             | C, C  | 2,371,210        | 2,366,489        | 2,367,218        | 2,364,868        | 2,363,450        | 2,363,549        | 2,363,132        | 2,366,048        |
| 42             | C, C  | 2,442,718        | 2,444,816        | 2,442,411        | 2,442,006        | 2,440,361        | 2,441,394        | 2,436,908        | 2,443,236        |
| <b>Average</b> |   | <b>1,876,424</b> | <b>1,876,000</b> | <b>1,876,170</b> | <b>1,875,923</b> | <b>1,875,340</b> | <b>1,875,404</b> | <b>1,879,536</b> | <b>1,876,197</b> |
| <b>Maximum</b> |   | <b>2,442,718</b> | <b>2,444,816</b> | <b>2,442,411</b> | <b>2,442,006</b> | <b>2,440,361</b> | <b>2,441,394</b> | <b>2,436,908</b> | <b>2,443,236</b> |
| <b>Minimum</b> |   | <b>1,331,479</b> | <b>1,331,516</b> | <b>1,331,440</b> | <b>1,331,630</b> | <b>1,331,236</b> | <b>1,331,563</b> | <b>1,332,672</b> | <b>1,331,611</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-14. Simulated Groundwater Pumping in C2VSimFG Subregion 14 (SR14)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)  | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|-----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 217,444   | 180,704   | 197,477     | 197,458          | 214,893     | 214,926     | 597,581   | 213,230   |
| 2    | W, W  | 334,785   | 207,209   | 305,683     | 305,831          | 349,371     | 348,878     | 822,546   | 217,423   |
| 3    | C, C  | 653,105   | 614,679   | 682,995     | 683,112          | 713,484     | 691,880     | 846,912   | 632,408   |
| 4    | C, C  | 1,261,358 | 1,259,735 | 1,281,991   | 1,281,398        | 1,285,861   | 1,282,336   | 1,282,474 | 1,278,442 |
| 5    | AN, W   | 388,038   | 392,655   | 385,415     | 385,349          | 455,878     | 455,684     | 782,783   | 383,482   |
| 6    | BN, AN  | 478,246   | 352,370   | 473,606     | 487,482          | 511,531     | 521,757     | 841,074   | 387,018   |
| 7    | AN, W   | 245,050   | 217,304   | 242,962     | 245,770          | 302,863     | 304,904     | 599,530   | 219,180   |
| 8    | D, D  | 468,346   | 287,940   | 490,380     | 490,435          | 527,583     | 525,571     | 895,896   | 475,414   |
| 9    | W, W  | 293,660   | 233,400   | 296,629     | 296,617          | 313,026     | 313,360     | 669,948   | 297,178   |
| 10   | W, W  | 169,794   | 169,798   | 169,802     | 169,802          | 180,963     | 180,952     | 430,314   | 169,796   |
| 11   | W, AN   | 192,518   | 185,711   | 185,725     | 185,706          | 197,980     | 198,057     | 540,956   | 182,659   |
| 12   | D, D  | 501,029   | 433,636   | 515,475     | 515,431          | 557,054     | 557,477     | 915,440   | 515,350   |
| 13   | W, W  | 253,469   | 240,718   | 261,382     | 261,391          | 268,068     | 266,664     | 674,763   | 253,647   |
| 14   | D, D  | 506,645   | 432,225   | 531,368     | 531,503          | 564,460     | 564,088     | 768,524   | 508,541   |
| 15   | C, C  | 723,018   | 625,504   | 811,010     | 810,886          | 773,807     | 820,455     | 853,286   | 805,100   |
| 16   | D, C  | 751,380   | 698,441   | 775,968     | 777,214          | 828,539     | 779,387     | 936,513   | 793,841   |
| 17   | C, C  | 1,083,799 | 963,332   | 1,088,918   | 1,054,252        | 1,041,042   | 1,048,078   | 1,138,414 | 1,094,599 |
| 18   | C, C  | 1,337,123 | 1,281,026 | 1,336,583   | 1,320,503        | 1,311,885   | 1,320,004   | 1,332,958 | 1,336,904 |
| 19   | C, C  | 1,312,180 | 1,229,633 | 1,312,613   | 1,312,483        | 1,252,077   | 1,274,570   | 1,307,784 | 1,312,010 |
| 20   | AN, W   | 612,542   | 475,919   | 489,033     | 495,898          | 574,514     | 566,166     | 1,069,355 | 475,358   |
| 21   | C, C  | 806,978   | 647,736   | 887,047     | 895,896          | 881,617     | 906,061     | 1,163,254 | 805,692   |
| 22   | W, W  | 346,676   | 318,178   | 362,882     | 365,330          | 378,274     | 380,433     | 867,170   | 339,286   |
| 23   | W, W  | 277,874   | 277,831   | 281,514     | 281,638          | 301,070     | 301,034     | 830,468   | 270,132   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)         | Alt1 (AF)        | Alt2v1 (AF)      | Alt2v1wTUCP (AF) | Alt2v2 (AF)      | Alt2v3 (AF)      | Alt3 (AF)        | Alt4 (AF)        |
|----------------|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 24             | W, W  | 262,261          | 219,092          | 219,254          | 219,241          | 238,263          | 238,316          | 702,582          | 219,241          |
| 25             | W, W  | 211,290          | 211,020          | 205,946          | 206,114          | 223,790          | 223,887          | 619,106          | 211,179          |
| 26             | W, AN   | 240,406          | 231,859          | 233,204          | 233,166          | 252,022          | 252,054          | 708,399          | 225,666          |
| 27             | AN, AN  | 589,219          | 399,344          | 568,067          | 567,973          | 655,123          | 656,895          | 1,122,065        | 437,876          |
| 28             | D, D  | 759,942          | 580,227          | 777,662          | 777,845          | 821,070          | 812,746          | 1,050,827        | 735,522          |
| 29             | D, D  | 792,353          | 702,693          | 811,076          | 811,084          | 856,315          | 852,791          | 1,159,921        | 813,447          |
| 30             | AN, BN  | 647,447          | 572,427          | 661,347          | 661,349          | 730,234          | 717,487          | 1,124,121        | 677,686          |
| 31             | BN, D   | 719,907          | 534,506          | 761,152          | 754,476          | 822,755          | 821,263          | 1,171,304        | 747,718          |
| 32             | AN, W   | 347,666          | 292,813          | 326,697          | 325,030          | 382,258          | 381,908          | 841,535          | 319,492          |
| 33             | W, W  | 218,468          | 213,848          | 213,256          | 213,274          | 231,602          | 231,676          | 609,109          | 211,379          |
| 34             | D, C  | 598,223          | 499,436          | 601,767          | 601,526          | 644,352          | 643,713          | 908,061          | 617,674          |
| 35             | C, C  | 867,453          | 799,571          | 908,848          | 908,715          | 948,051          | 938,181          | 1,116,192        | 924,972          |
| 36             | D, BN   | 1,199,865        | 1,134,830        | 1,215,289        | 1,217,220        | 1,253,793        | 1,262,285        | 1,321,025        | 1,251,467        |
| 37             | BN, AN  | 803,612          | 743,043          | 824,338          | 823,352          | 863,235          | 860,387          | 1,118,019        | 787,942          |
| 38             | W, W  | 286,835          | 274,507          | 291,563          | 291,252          | 298,976          | 297,702          | 682,273          | 280,512          |
| 39             | BN, D   | 437,808          | 373,732          | 380,035          | 379,954          | 423,706          | 422,930          | 830,504          | 383,975          |
| 40             | D, C  | 778,501          | 739,899          | 817,421          | 815,230          | 854,096          | 867,604          | 1,136,503        | 844,562          |
| 41             | C, C  | 1,221,428        | 1,216,964        | 1,258,899        | 1,257,787        | 1,257,222        | 1,257,785        | 1,300,580        | 1,265,805        |
| 42             | C, C  | 1,358,624        | 1,337,874        | 1,358,384        | 1,318,999        | 1,318,584        | 1,319,076        | 1,354,658        | 1,358,506        |
| <b>Average</b> |   | <b>608,485</b>   | <b>542,937</b>   | <b>614,301</b>   | <b>612,737</b>   | <b>639,554</b>   | <b>640,033</b>   | <b>929,636</b>   | <b>601,936</b>   |
| <b>Maximum</b> |   | <b>1,358,624</b> | <b>1,337,874</b> | <b>1,358,384</b> | <b>1,320,503</b> | <b>1,318,584</b> | <b>1,320,004</b> | <b>1,354,658</b> | <b>1,358,506</b> |
| <b>Minimum</b> |   | <b>169,794</b>   | <b>169,798</b>   | <b>169,802</b>   | <b>169,802</b>   | <b>180,963</b>   | <b>180,952</b>   | <b>430,314</b>   | <b>169,796</b>   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-15. Simulated Groundwater Pumping in C2VSimFG Subregion 15 (SR15)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)  | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|-----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 1,364,638 | 1,336,529 | 1,367,359   | 1,367,336        | 1,370,856   | 1,370,441   | 1,409,929 | 1,361,583 |
| 2    | W, W  | 1,408,960 | 1,373,441 | 1,405,111   | 1,405,671        | 1,414,042   | 1,413,750   | 1,473,197 | 1,398,286 |
| 3    | C, C  | 1,776,151 | 1,772,209 | 1,776,391   | 1,775,949        | 1,749,053   | 1,763,791   | 1,815,920 | 1,774,871 |
| 4    | C, C  | 1,884,624 | 1,873,158 | 1,880,166   | 1,873,194        | 1,869,492   | 1,870,054   | 1,895,833 | 1,880,247 |
| 5    | AN, W   | 1,316,921 | 1,311,582 | 1,313,712   | 1,313,663        | 1,320,900   | 1,320,644   | 1,359,503 | 1,313,477 |
| 6    | BN, AN  | 1,312,372 | 1,291,536 | 1,310,806   | 1,312,311        | 1,321,138   | 1,323,205   | 1,360,544 | 1,303,130 |
| 7    | AN, W   | 1,271,260 | 1,266,187 | 1,269,048   | 1,269,452        | 1,277,686   | 1,277,689   | 1,303,732 | 1,265,524 |
| 8    | D, D  | 1,618,274 | 1,587,313 | 1,616,674   | 1,616,946        | 1,623,404   | 1,623,127   | 1,681,829 | 1,613,728 |
| 9    | W, W  | 1,156,076 | 1,145,273 | 1,150,359   | 1,150,344        | 1,150,819   | 1,150,270   | 1,227,085 | 1,149,480 |
| 10   | W, W  | 1,091,851 | 1,091,737 | 1,091,562   | 1,091,046        | 1,091,874   | 1,091,785   | 1,133,500 | 1,091,809 |
| 11   | W, AN   | 1,465,620 | 1,452,913 | 1,465,218   | 1,464,625        | 1,465,569   | 1,465,196   | 1,538,176 | 1,464,344 |
| 12   | D, D  | 1,648,627 | 1,628,995 | 1,645,482   | 1,645,127        | 1,653,957   | 1,653,511   | 1,700,915 | 1,638,979 |
| 13   | W, W  | 1,237,955 | 1,236,819 | 1,239,002   | 1,239,100        | 1,239,660   | 1,239,697   | 1,276,964 | 1,236,749 |
| 14   | D, D  | 1,593,893 | 1,564,230 | 1,595,238   | 1,595,387        | 1,596,182   | 1,596,225   | 1,624,925 | 1,587,632 |
| 15   | C, C  | 1,782,109 | 1,764,904 | 1,785,946   | 1,786,459        | 1,780,624   | 1,785,048   | 1,816,831 | 1,788,302 |
| 16   | D, C  | 1,812,490 | 1,797,433 | 1,812,274   | 1,811,973        | 1,819,025   | 1,815,813   | 1,855,438 | 1,805,604 |
| 17   | C, C  | 1,840,876 | 1,818,220 | 1,840,247   | 1,838,745        | 1,830,890   | 1,829,917   | 1,852,533 | 1,841,122 |
| 18   | C, C  | 1,770,705 | 1,761,745 | 1,765,526   | 1,765,505        | 1,767,431   | 1,774,315   | 1,786,678 | 1,762,231 |
| 19   | C, C  | 1,813,940 | 1,799,528 | 1,817,203   | 1,817,485        | 1,812,052   | 1,810,304   | 1,832,522 | 1,813,833 |
| 20   | AN, W   | 1,243,778 | 1,214,663 | 1,240,205   | 1,239,640        | 1,245,032   | 1,244,007   | 1,284,622 | 1,237,015 |
| 21   | C, C  | 1,654,460 | 1,626,031 | 1,654,858   | 1,656,390        | 1,659,087   | 1,661,810   | 1,694,994 | 1,649,258 |
| 22   | W, W  | 1,101,599 | 1,097,643 | 1,101,920   | 1,101,879        | 1,101,338   | 1,101,427   | 1,156,169 | 1,100,216 |
| 23   | W, W  | 1,297,121 | 1,269,666 | 1,289,010   | 1,289,013        | 1,285,715   | 1,289,049   | 1,343,933 | 1,289,288 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)         | Alt1 (AF)        | Alt2v1 (AF)      | Alt2v1wTUCP (AF) | Alt2v2 (AF)      | Alt2v3 (AF)      | Alt3 (AF)        | Alt4 (AF)        |
|----------------|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 24             | W, W  | 1,402,318        | 1,387,068        | 1,399,131        | 1,399,071        | 1,399,076        | 1,399,297        | 1,465,327        | 1,399,391        |
| 25             | W, W  | 1,009,019        | 1,010,149        | 1,007,941        | 1,007,749        | 1,008,135        | 1,008,024        | 1,053,060        | 1,007,536        |
| 26             | W, AN   | 1,370,129        | 1,343,755        | 1,372,005        | 1,372,169        | 1,372,107        | 1,372,113        | 1,423,789        | 1,370,217        |
| 27             | AN, AN  | 1,436,769        | 1,396,843        | 1,428,479        | 1,428,185        | 1,437,471        | 1,437,867        | 1,484,576        | 1,425,232        |
| 28             | D, D  | 1,607,368        | 1,569,579        | 1,606,218        | 1,605,953        | 1,618,488        | 1,619,002        | 1,631,179        | 1,601,890        |
| 29             | D, D  | 1,694,507        | 1,666,025        | 1,693,012        | 1,693,313        | 1,698,232        | 1,698,278        | 1,746,012        | 1,684,784        |
| 30             | AN, BN  | 1,540,423        | 1,501,420        | 1,541,772        | 1,541,600        | 1,545,882        | 1,544,576        | 1,591,334        | 1,543,885        |
| 31             | BN, D   | 1,673,196        | 1,621,455        | 1,662,999        | 1,662,597        | 1,671,106        | 1,672,494        | 1,714,952        | 1,660,271        |
| 32             | AN, W   | 1,200,417        | 1,140,158        | 1,198,440        | 1,198,079        | 1,201,989        | 1,201,913        | 1,250,134        | 1,193,900        |
| 33             | W, W  | 1,115,104        | 1,117,098        | 1,114,975        | 1,114,622        | 1,118,494        | 1,118,983        | 1,195,199        | 1,113,666        |
| 34             | D, C  | 1,715,684        | 1,667,523        | 1,708,226        | 1,708,044        | 1,715,317        | 1,715,171        | 1,765,193        | 1,706,143        |
| 35             | C, C  | 1,717,460        | 1,686,395        | 1,717,304        | 1,717,344        | 1,723,052        | 1,721,964        | 1,750,350        | 1,712,683        |
| 36             | D, BN   | 1,761,478        | 1,741,304        | 1,760,251        | 1,760,443        | 1,774,258        | 1,775,168        | 1,781,188        | 1,760,494        |
| 37             | BN, AN  | 1,566,608        | 1,552,373        | 1,565,544        | 1,565,395        | 1,570,272        | 1,570,386        | 1,619,712        | 1,563,389        |
| 38             | W, W  | 1,167,244        | 1,151,945        | 1,161,261        | 1,161,300        | 1,161,299        | 1,161,335        | 1,228,762        | 1,161,112        |
| 39             | BN, D   | 1,544,116        | 1,524,436        | 1,543,253        | 1,543,160        | 1,544,182        | 1,544,136        | 1,599,501        | 1,548,946        |
| 40             | D, C  | 1,873,124        | 1,851,768        | 1,877,798        | 1,877,503        | 1,875,423        | 1,883,393        | 1,907,421        | 1,874,269        |
| 41             | C, C  | 2,030,798        | 2,026,536        | 2,031,584        | 2,024,929        | 2,028,676        | 2,028,969        | 2,041,653        | 2,026,383        |
| 42             | C, C  | 1,947,115        | 1,915,098        | 1,945,865        | 1,941,731        | 1,942,610        | 1,942,386        | 1,972,627        | 1,945,154        |
| <b>Average</b> |   | <b>1,519,933</b> | <b>1,498,873</b> | <b>1,518,318</b> | <b>1,517,867</b> | <b>1,520,283</b> | <b>1,521,108</b> | <b>1,563,041</b> | <b>1,515,858</b> |
| <b>Maximum</b> |   | <b>2,030,798</b> | <b>2,026,536</b> | <b>2,031,584</b> | <b>2,024,929</b> | <b>2,028,676</b> | <b>2,028,969</b> | <b>2,041,653</b> | <b>2,026,383</b> |
| <b>Minimum</b> |   | <b>1,009,019</b> | <b>1,010,149</b> | <b>1,007,941</b> | <b>1,007,749</b> | <b>1,008,135</b> | <b>1,008,024</b> | <b>1,053,060</b> | <b>1,007,536</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-16. Simulated Groundwater Pumping in C2VSimFG Subregion 16 (SR16)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 76,207   | 76,233    | 76,207      | 76,228           | 76,233      | 76,207      | 76,198    | 76,151    |
| 2    | W, W  | 52,962   | 52,962    | 52,974      | 52,957           | 52,957      | 52,961      | 52,962    | 52,962    |
| 3    | C, C  | 244,725  | 244,774   | 244,627     | 244,694          | 244,711     | 244,645     | 244,609   | 244,716   |
| 4    | C, C  | 298,260  | 298,333   | 298,304     | 298,315          | 298,359     | 298,414     | 298,379   | 298,333   |
| 5    | AN, W   | 113,023  | 112,975   | 113,017     | 113,017          | 113,022     | 112,955     | 113,005   | 113,017   |
| 6    | BN, AN  | 38,209   | 38,209    | 38,209      | 38,205           | 38,209      | 38,209      | 38,209    | 38,175    |
| 7    | AN, W   | 63,638   | 63,638    | 63,638      | 63,602           | 63,631      | 63,582      | 63,638    | 63,638    |
| 8    | D, D  | 75,429   | 75,439    | 75,442      | 75,442           | 75,442      | 75,406      | 75,430    | 75,442    |
| 9    | W, W  | 101,496  | 101,455   | 101,480     | 101,418          | 101,465     | 101,583     | 101,492   | 101,502   |
| 10   | W, W  | 38,042   | 38,042    | 38,042      | 38,042           | 38,042      | 38,009      | 38,042    | 38,042    |
| 11   | W, AN   | 52,652   | 52,576    | 52,652      | 52,659           | 52,659      | 52,659      | 52,659    | 52,659    |
| 12   | D, D  | 74,714   | 74,782    | 74,714      | 74,720           | 74,703      | 74,703      | 74,714    | 74,714    |
| 13   | W, W  | 96,090   | 96,152    | 96,165      | 96,191           | 96,145      | 96,193      | 96,090    | 96,082    |
| 14   | D, D  | 148,673  | 148,723   | 148,604     | 148,698          | 148,740     | 148,714     | 148,712   | 148,724   |
| 15   | C, C  | 195,484  | 195,622   | 195,602     | 195,434          | 195,599     | 195,530     | 195,653   | 195,593   |
| 16   | D, C  | 195,700  | 195,660   | 195,685     | 195,604          | 195,598     | 195,679     | 195,678   | 195,674   |
| 17   | C, C  | 218,217  | 218,141   | 218,261     | 218,308          | 218,356     | 218,248     | 218,323   | 218,279   |
| 18   | C, C  | 151,753  | 151,867   | 151,803     | 151,913          | 151,739     | 151,910     | 151,882   | 151,708   |
| 19   | C, C  | 194,701  | 194,759   | 194,724     | 194,672          | 194,716     | 194,719     | 194,768   | 194,720   |
| 20   | AN, W   | 75,978   | 75,955    | 75,908      | 75,953           | 75,886      | 75,826      | 75,905    | 75,978    |
| 21   | C, C  | 132,218  | 132,199   | 132,199     | 132,240          | 132,240     | 132,240     | 132,200   | 132,218   |
| 22   | W, W  | 104,712  | 104,724   | 104,745     | 104,723          | 104,732     | 104,732     | 104,739   | 104,669   |
| 23   | W, W  | 89,028   | 89,054    | 89,028      | 89,028           | 89,028      | 89,028      | 88,955    | 89,028    |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 54,344         | 54,322         | 54,351         | 54,358           | 54,358         | 54,314         | 54,375         | 54,351         |
| 25             | W, W  | 70,803         | 70,803         | 70,768         | 70,803           | 70,803         | 70,784         | 70,803         | 70,803         |
| 26             | W, AN   | 50,393         | 50,386         | 50,393         | 50,386           | 50,383         | 50,393         | 50,393         | 50,393         |
| 27             | AN, AN  | 136,049        | 136,039        | 136,038        | 136,044          | 136,020        | 136,035        | 136,095        | 136,000        |
| 28             | D, D  | 152,772        | 152,795        | 152,773        | 152,775          | 152,772        | 152,746        | 152,792        | 152,754        |
| 29             | D, D  | 144,596        | 144,532        | 144,565        | 144,547          | 144,565        | 144,567        | 144,591        | 144,528        |
| 30             | AN, BN  | 139,999        | 140,116        | 140,067        | 140,109          | 140,117        | 140,117        | 140,059        | 140,057        |
| 31             | BN, D   | 105,054        | 105,031        | 105,060        | 104,984          | 105,020        | 105,020        | 105,064        | 105,077        |
| 32             | AN, W   | 77,386         | 77,386         | 77,366         | 77,352           | 77,386         | 77,386         | 77,386         | 77,386         |
| 33             | W, W  | 51,114         | 51,153         | 51,153         | 51,153           | 51,125         | 51,153         | 51,153         | 51,153         |
| 34             | D, C  | 176,425        | 176,260        | 176,422        | 176,494          | 176,425        | 176,463        | 176,595        | 176,440        |
| 35             | C, C  | 144,072        | 144,092        | 144,072        | 143,995          | 144,024        | 144,083        | 144,042        | 144,043        |
| 36             | D, BN   | 145,432        | 145,491        | 145,585        | 145,610          | 145,505        | 145,491        | 145,572        | 145,458        |
| 37             | BN, AN  | 152,072        | 151,991        | 152,028        | 152,039          | 152,047        | 151,998        | 152,191        | 152,000        |
| 38             | W, W  | 94,340         | 94,356         | 94,336         | 94,333           | 94,340         | 94,335         | 94,317         | 94,340         |
| 39             | BN, D   | 240,055        | 239,969        | 239,995        | 240,063          | 239,981        | 239,994        | 240,238        | 240,056        |
| 40             | D, C  | 335,354        | 335,445        | 335,390        | 335,348          | 335,339        | 335,385        | 335,534        | 335,337        |
| 41             | C, C  | 384,853        | 384,848        | 384,865        | 384,899          | 385,007        | 384,970        | 384,922        | 384,884        |
| 42             | C, C  | 394,689        | 394,630        | 394,629        | 394,617          | 394,691        | 394,689        | 394,704        | 394,698        |
| <b>Average</b> |   | <b>140,041</b> | <b>140,046</b> | <b>140,045</b> | <b>140,047</b>   | <b>140,050</b> | <b>140,049</b> | <b>140,073</b> | <b>140,042</b> |
| <b>Maximum</b> |   | <b>394,689</b> | <b>394,630</b> | <b>394,629</b> | <b>394,617</b>   | <b>394,691</b> | <b>394,689</b> | <b>394,704</b> | <b>394,698</b> |
| <b>Minimum</b> |   | <b>38,042</b>  | <b>38,042</b>  | <b>38,042</b>  | <b>38,042</b>    | <b>38,042</b>  | <b>38,009</b>  | <b>38,042</b>  | <b>38,042</b>  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-17. Simulated Groundwater Pumping in C2VSimFG Subregion 17 (SR17)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 222,330  | 222,316   | 222,331     | 222,255          | 222,281     | 222,354     | 222,346   | 222,350   |
| 2    | W, W  | 326,164  | 326,151   | 326,074     | 326,182          | 326,077     | 326,169     | 326,192   | 326,121   |
| 3    | C, C  | 697,964  | 697,954   | 697,958     | 697,893          | 697,992     | 697,938     | 698,054   | 697,954   |
| 4    | C, C  | 676,468  | 676,518   | 676,496     | 676,455          | 676,510     | 676,476     | 676,474   | 676,497   |
| 5    | AN, W   | 216,490  | 216,397   | 216,510     | 216,493          | 216,485     | 216,475     | 216,480   | 216,412   |
| 6    | BN, AN  | 189,438  | 189,450   | 189,463     | 189,412          | 189,422     | 189,414     | 189,442   | 189,449   |
| 7    | AN, W   | 180,232  | 180,187   | 180,233     | 180,248          | 180,182     | 180,185     | 180,199   | 180,178   |
| 8    | D, D  | 403,641  | 403,595   | 403,632     | 403,611          | 403,593     | 403,596     | 403,653   | 403,608   |
| 9    | W, W  | 181,510  | 181,490   | 181,523     | 181,491          | 181,514     | 181,521     | 181,546   | 181,508   |
| 10   | W, W  | 156,626  | 156,633   | 156,631     | 156,625          | 156,592     | 156,628     | 156,598   | 156,630   |
| 11   | W, AN   | 276,691  | 276,674   | 276,709     | 276,681          | 276,824     | 276,842     | 276,774   | 276,717   |
| 12   | D, D  | 427,678  | 427,640   | 427,641     | 427,620          | 427,594     | 427,580     | 427,789   | 427,666   |
| 13   | W, W  | 218,544  | 218,334   | 218,483     | 218,408          | 218,348     | 218,406     | 218,374   | 218,429   |
| 14   | D, D  | 438,202  | 438,299   | 438,120     | 438,137          | 438,339     | 438,314     | 438,232   | 438,140   |
| 15   | C, C  | 591,736  | 591,431   | 591,614     | 591,779          | 591,614     | 591,613     | 591,692   | 591,652   |
| 16   | D, C  | 546,279  | 546,292   | 546,286     | 546,295          | 546,228     | 546,285     | 546,272   | 546,128   |
| 17   | C, C  | 575,710  | 575,758   | 575,726     | 575,679          | 575,768     | 575,727     | 575,770   | 575,814   |
| 18   | C, C  | 467,778  | 467,762   | 467,778     | 467,824          | 467,765     | 467,822     | 467,745   | 467,825   |
| 19   | C, C  | 571,768  | 571,780   | 571,762     | 571,791          | 571,751     | 571,822     | 571,695   | 571,625   |
| 20   | AN, W   | 218,213  | 218,219   | 218,199     | 218,174          | 218,220     | 218,199     | 218,222   | 218,287   |
| 21   | C, C  | 460,021  | 460,006   | 459,986     | 459,927          | 460,017     | 460,008     | 460,136   | 459,939   |
| 22   | W, W  | 159,127  | 159,136   | 159,136     | 159,126          | 159,142     | 159,128     | 159,130   | 159,120   |
| 23   | W, W  | 206,473  | 206,413   | 206,446     | 206,420          | 206,419     | 206,431     | 206,378   | 206,423   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 263,695        | 263,754        | 263,707        | 263,731          | 263,696        | 263,758        | 263,822        | 263,824        |
| 25             | W, W  | 177,972        | 177,985        | 177,934        | 177,915          | 177,939        | 177,961        | 177,927        | 177,895        |
| 26             | W, AN   | 281,325        | 281,370        | 281,378        | 281,395          | 281,345        | 281,314        | 281,388        | 281,382        |
| 27             | AN, AN  | 293,925        | 293,919        | 293,906        | 293,868          | 293,926        | 293,876        | 293,971        | 293,875        |
| 28             | D, D  | 454,624        | 454,568        | 454,583        | 454,574          | 454,605        | 454,701        | 454,757        | 454,646        |
| 29             | D, D  | 468,865        | 468,860        | 468,878        | 468,809          | 468,852        | 468,806        | 468,937        | 468,829        |
| 30             | AN, BN  | 375,890        | 375,779        | 375,785        | 375,894          | 375,857        | 375,848        | 376,005        | 375,822        |
| 31             | BN, D   | 485,730        | 485,819        | 485,747        | 485,876          | 485,845        | 485,758        | 485,862        | 485,853        |
| 32             | AN, W   | 221,892        | 221,914        | 222,015        | 221,978          | 221,974        | 222,000        | 221,953        | 221,860        |
| 33             | W, W  | 171,492        | 171,417        | 171,439        | 171,493          | 171,384        | 171,574        | 171,511        | 171,407        |
| 34             | D, C  | 633,401        | 633,141        | 633,218        | 633,367          | 633,456        | 633,382        | 633,315        | 633,448        |
| 35             | C, C  | 415,967        | 416,030        | 415,958        | 415,915          | 415,949        | 415,949        | 415,932        | 415,911        |
| 36             | D, BN   | 467,383        | 467,428        | 467,294        | 467,461          | 467,441        | 467,318        | 467,466        | 467,397        |
| 37             | BN, AN  | 379,419        | 379,534        | 379,526        | 379,572          | 379,568        | 379,522        | 379,535        | 379,348        |
| 38             | W, W  | 263,749        | 263,748        | 263,751        | 263,742          | 263,782        | 263,738        | 263,718        | 263,774        |
| 39             | BN, D   | 422,389        | 422,486        | 422,399        | 422,399          | 422,376        | 422,389        | 422,476        | 422,466        |
| 40             | D, C  | 590,717        | 590,654        | 590,763        | 590,704          | 590,675        | 590,752        | 590,718        | 590,698        |
| 41             | C, C  | 630,300        | 630,234        | 630,286        | 630,308          | 630,327        | 630,314        | 630,308        | 630,231        |
| 42             | C, C  | 632,538        | 632,585        | 632,591        | 632,607          | 632,589        | 632,565        | 632,590        | 632,575        |
| <b>Average</b> |   | <b>381,913</b> | <b>381,897</b> | <b>381,902</b> | <b>381,908</b>   | <b>381,911</b> | <b>381,916</b> | <b>381,938</b> | <b>381,898</b> |
| <b>Maximum</b> |   | <b>697,964</b> | <b>697,954</b> | <b>697,958</b> | <b>697,893</b>   | <b>697,992</b> | <b>697,938</b> | <b>698,054</b> | <b>697,954</b> |
| <b>Minimum</b> |   | <b>156,626</b> | <b>156,633</b> | <b>156,631</b> | <b>156,625</b>   | <b>156,592</b> | <b>156,628</b> | <b>156,598</b> | <b>156,630</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-18. Simulated Groundwater Pumping in C2VSimFG Subregion 18 (SR18)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)  | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|-----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 1,123,771 | 1,123,084 | 1,123,743   | 1,123,603        | 1,123,697   | 1,123,666   | 1,124,781 | 1,123,688 |
| 2    | W, W  | 1,205,421 | 1,203,989 | 1,205,366   | 1,205,593        | 1,205,578   | 1,205,431   | 1,206,997 | 1,204,985 |
| 3    | C, C  | 1,779,386 | 1,777,404 | 1,779,462   | 1,779,398        | 1,779,448   | 1,779,236   | 1,788,962 | 1,779,092 |
| 4    | C, C  | 1,889,705 | 1,889,682 | 1,889,714   | 1,889,702        | 1,891,304   | 1,891,205   | 1,891,100 | 1,889,631 |
| 5    | AN, W   | 924,694   | 924,582   | 924,641     | 924,814          | 925,023     | 924,989     | 924,987   | 924,682   |
| 6    | BN, AN  | 1,082,231 | 1,081,558 | 1,082,216   | 1,082,317        | 1,082,368   | 1,082,387   | 1,083,417 | 1,082,344 |
| 7    | AN, W   | 938,442   | 937,970   | 938,312     | 938,385          | 938,285     | 938,463     | 939,351   | 938,342   |
| 8    | D, D  | 1,481,962 | 1,480,334 | 1,481,732   | 1,481,840        | 1,481,936   | 1,482,267   | 1,485,880 | 1,481,592 |
| 9    | W, W  | 901,531   | 900,929   | 901,515     | 901,472          | 901,736     | 901,641     | 904,618   | 901,566   |
| 10   | W, W  | 632,901   | 632,821   | 632,896     | 632,878          | 632,961     | 632,902     | 633,117   | 632,886   |
| 11   | W, AN   | 1,272,564 | 1,272,065 | 1,272,330   | 1,272,415        | 1,277,139   | 1,277,211   | 1,273,379 | 1,272,288 |
| 12   | D, D  | 1,507,205 | 1,506,713 | 1,507,352   | 1,507,073        | 1,502,851   | 1,502,954   | 1,510,042 | 1,507,352 |
| 13   | W, W  | 1,027,636 | 1,027,302 | 1,027,580   | 1,027,621        | 1,027,028   | 1,027,137   | 1,028,370 | 1,027,536 |
| 14   | D, D  | 1,485,071 | 1,483,817 | 1,485,120   | 1,485,159        | 1,485,219   | 1,485,120   | 1,492,889 | 1,484,563 |
| 15   | C, C  | 1,675,408 | 1,673,410 | 1,675,370   | 1,675,337        | 1,675,422   | 1,676,669   | 1,682,550 | 1,675,012 |
| 16   | D, C  | 1,610,612 | 1,608,706 | 1,610,997   | 1,611,025        | 1,611,087   | 1,610,890   | 1,618,693 | 1,610,386 |
| 17   | C, C  | 1,748,702 | 1,745,936 | 1,748,715   | 1,748,545        | 1,748,552   | 1,748,519   | 1,757,324 | 1,748,000 |
| 18   | C, C  | 1,563,233 | 1,561,272 | 1,563,375   | 1,563,502        | 1,563,504   | 1,565,350   | 1,567,820 | 1,563,096 |
| 19   | C, C  | 1,645,189 | 1,644,171 | 1,645,343   | 1,645,250        | 1,645,402   | 1,644,696   | 1,650,633 | 1,645,007 |
| 20   | AN, W   | 1,046,518 | 1,046,238 | 1,046,382   | 1,046,076        | 1,046,379   | 1,046,351   | 1,046,087 | 1,046,240 |
| 21   | C, C  | 1,521,560 | 1,519,421 | 1,521,595   | 1,521,488        | 1,522,875   | 1,522,515   | 1,539,910 | 1,521,134 |
| 22   | W, W  | 739,307   | 738,823   | 739,269     | 739,262          | 739,150     | 739,257     | 741,445   | 739,225   |
| 23   | W, W  | 1,075,534 | 1,074,892 | 1,075,563   | 1,075,647        | 1,075,641   | 1,075,513   | 1,077,370 | 1,075,697 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)         | Alt1 (AF)        | Alt2v1 (AF)      | Alt2v1wTUCP (AF) | Alt2v2 (AF)      | Alt2v3 (AF)      | Alt3 (AF)        | Alt4 (AF)        |
|----------------|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 24             | W, W  | 1,272,191        | 1,271,665        | 1,272,267        | 1,272,188        | 1,271,956        | 1,272,091        | 1,274,153        | 1,271,827        |
| 25             | W, W  | 646,933          | 646,172          | 646,831          | 646,866          | 646,846          | 646,812          | 648,635          | 646,887          |
| 26             | W, AN   | 1,177,351        | 1,176,828        | 1,177,211        | 1,177,253        | 1,177,076        | 1,177,255        | 1,178,367        | 1,177,079        |
| 27             | AN, AN  | 1,189,246        | 1,188,602        | 1,189,070        | 1,189,101        | 1,189,187        | 1,189,043        | 1,191,734        | 1,188,972        |
| 28             | D, D  | 1,352,719        | 1,351,174        | 1,352,648        | 1,352,679        | 1,352,634        | 1,352,654        | 1,370,342        | 1,352,565        |
| 29             | D, D  | 1,567,093        | 1,565,571        | 1,567,190        | 1,567,167        | 1,567,022        | 1,567,172        | 1,576,074        | 1,566,870        |
| 30             | AN, BN  | 1,277,848        | 1,272,455        | 1,277,825        | 1,277,719        | 1,277,851        | 1,277,734        | 1,285,032        | 1,277,390        |
| 31             | BN, D   | 1,525,792        | 1,526,782        | 1,525,658        | 1,525,607        | 1,525,474        | 1,525,738        | 1,531,926        | 1,525,290        |
| 32             | AN, W   | 973,272          | 972,277          | 973,229          | 973,315          | 973,255          | 973,168          | 975,166          | 973,106          |
| 33             | W, W  | 1,022,837        | 1,022,129        | 1,022,596        | 1,022,534        | 1,022,767        | 1,022,705        | 1,024,581        | 1,022,719        |
| 34             | D, C  | 1,735,687        | 1,733,658        | 1,735,906        | 1,736,045        | 1,735,836        | 1,735,721        | 1,743,545        | 1,735,612        |
| 35             | C, C  | 1,424,216        | 1,422,581        | 1,424,095        | 1,424,039        | 1,424,070        | 1,424,152        | 1,429,706        | 1,423,790        |
| 36             | D, BN   | 1,484,974        | 1,483,687        | 1,484,982        | 1,484,988        | 1,485,428        | 1,484,981        | 1,489,085        | 1,485,032        |
| 37             | BN, AN  | 1,206,196        | 1,205,326        | 1,206,192        | 1,206,128        | 1,205,939        | 1,206,174        | 1,207,029        | 1,205,994        |
| 38             | W, W  | 830,635          | 829,311          | 830,597          | 830,557          | 830,401          | 830,431          | 831,255          | 830,517          |
| 39             | BN, D   | 1,461,569        | 1,459,793        | 1,461,334        | 1,461,453        | 1,461,748        | 1,461,782        | 1,467,703        | 1,461,002        |
| 40             | D, C  | 1,737,586        | 1,736,236        | 1,737,547        | 1,737,632        | 1,737,391        | 1,737,494        | 1,744,008        | 1,737,243        |
| 41             | C, C  | 1,983,856        | 1,982,274        | 1,984,074        | 1,984,063        | 1,984,012        | 1,983,932        | 1,986,295        | 1,983,956        |
| 42             | C, C  | 1,905,934        | 1,905,756        | 1,905,917        | 1,905,927        | 1,907,353        | 1,906,098        | 1,907,762        | 1,905,909        |
| <b>Average</b> |   | <b>1,325,108</b> | <b>1,323,986</b> | <b>1,325,090</b> | <b>1,325,087</b> | <b>1,325,210</b> | <b>1,325,226</b> | <b>1,329,336</b> | <b>1,324,907</b> |
| <b>Maximum</b> |   | <b>1,983,856</b> | <b>1,982,274</b> | <b>1,984,074</b> | <b>1,984,063</b> | <b>1,984,012</b> | <b>1,983,932</b> | <b>1,986,295</b> | <b>1,983,956</b> |
| <b>Minimum</b> |   | <b>632,901</b>   | <b>632,821</b>   | <b>632,896</b>   | <b>632,878</b>   | <b>632,961</b>   | <b>632,902</b>   | <b>633,117</b>   | <b>632,886</b>   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-19. Simulated Groundwater Pumping in C2VSimFG Subregion 19 (SR19)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 441,750  | 441,750   | 441,750     | 441,750          | 441,750     | 441,693     | 441,750   | 441,708   |
| 2    | W, W  | 413,492  | 413,492   | 413,492     | 413,492          | 413,492     | 413,450     | 413,490   | 413,493   |
| 3    | C, C  | 538,828  | 538,828   | 538,792     | 538,828          | 538,828     | 538,820     | 538,828   | 538,828   |
| 4    | C, C  | 520,462  | 520,462   | 520,480     | 520,461          | 520,462     | 520,462     | 520,443   | 520,462   |
| 5    | AN, W   | 373,595  | 373,595   | 373,595     | 373,595          | 373,595     | 373,595     | 373,562   | 373,595   |
| 6    | BN, AN  | 344,562  | 344,562   | 344,562     | 344,558          | 344,561     | 344,562     | 344,544   | 344,561   |
| 7    | AN, W   | 367,405  | 367,383   | 367,395     | 367,427          | 367,426     | 367,426     | 367,426   | 367,426   |
| 8    | D, D  | 396,721  | 396,721   | 396,701     | 396,721          | 396,721     | 396,721     | 396,685   | 396,721   |
| 9    | W, W  | 350,036  | 350,036   | 350,036     | 350,036          | 350,036     | 350,036     | 350,036   | 350,036   |
| 10   | W, W  | 346,825  | 346,825   | 346,825     | 346,825          | 346,825     | 346,825     | 346,825   | 346,825   |
| 11   | W, AN   | 384,958  | 385,032   | 385,032     | 385,032          | 384,975     | 385,032     | 385,032   | 385,032   |
| 12   | D, D  | 379,555  | 379,576   | 379,566     | 379,550          | 379,576     | 379,564     | 379,562   | 379,575   |
| 13   | W, W  | 328,546  | 328,530   | 328,535     | 328,522          | 328,545     | 328,516     | 328,545   | 328,529   |
| 14   | D, D  | 391,802  | 391,845   | 391,832     | 391,824          | 391,814     | 391,776     | 391,836   | 391,845   |
| 15   | C, C  | 408,950  | 409,047   | 408,993     | 408,994          | 409,012     | 409,003     | 408,957   | 409,030   |
| 16   | D, C  | 402,413  | 402,126   | 402,113     | 402,377          | 402,412     | 402,395     | 402,412   | 402,353   |
| 17   | C, C  | 513,225  | 513,190   | 513,225     | 513,190          | 513,225     | 513,225     | 513,183   | 513,177   |
| 18   | C, C  | 475,836  | 475,872   | 475,872     | 475,872          | 475,872     | 475,872     | 475,864   | 475,813   |
| 19   | C, C  | 455,852  | 455,852   | 455,852     | 455,848          | 455,852     | 455,852     | 455,852   | 455,884   |
| 20   | AN, W   | 283,404  | 283,404   | 283,404     | 283,404          | 283,404     | 283,404     | 283,404   | 283,404   |
| 21   | C, C  | 376,544  | 376,544   | 376,547     | 376,544          | 376,544     | 376,544     | 376,544   | 376,544   |
| 22   | W, W  | 247,116  | 247,116   | 247,116     | 247,116          | 247,084     | 247,116     | 247,116   | 247,084   |
| 23   | W, W  | 263,595  | 263,569   | 263,572     | 263,625          | 263,625     | 263,625     | 263,625   | 263,573   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 253,109        | 253,298        | 253,184        | 253,285          | 253,284        | 253,254        | 253,210        | 253,253        |
| 25             | W, W  | 208,342        | 208,344        | 208,228        | 208,324          | 208,365        | 208,387        | 208,343        | 208,365        |
| 26             | W, AN   | 220,517        | 220,517        | 220,498        | 220,446          | 220,498        | 220,491        | 220,517        | 220,478        |
| 27             | AN, AN  | 270,084        | 270,057        | 270,100        | 270,100          | 270,073        | 270,084        | 270,084        | 270,084        |
| 28             | D, D  | 459,399        | 459,425        | 459,384        | 459,409          | 459,404        | 459,425        | 459,383        | 459,425        |
| 29             | D, D  | 466,762        | 466,772        | 466,772        | 466,772          | 466,759        | 466,760        | 466,772        | 466,759        |
| 30             | AN, BN  | 319,982        | 319,967        | 319,982        | 319,982          | 319,982        | 319,976        | 319,982        | 319,962        |
| 31             | BN, D   | 456,364        | 456,382        | 456,382        | 456,353          | 456,376        | 456,364        | 456,364        | 456,364        |
| 32             | AN, W   | 284,882        | 284,883        | 284,882        | 284,876          | 284,882        | 284,882        | 284,882        | 284,882        |
| 33             | W, W  | 203,714        | 203,698        | 203,699        | 203,714          | 203,714        | 203,714        | 203,714        | 203,714        |
| 34             | D, C  | 399,611        | 399,615        | 399,597        | 399,599          | 399,611        | 399,599        | 399,599        | 399,611        |
| 35             | C, C  | 570,115        | 570,115        | 570,115        | 570,115          | 570,098        | 570,115        | 570,088        | 570,115        |
| 36             | D, BN   | 551,859        | 551,850        | 551,859        | 551,857          | 551,859        | 551,849        | 551,859        | 551,859        |
| 37             | BN, AN  | 418,038        | 418,039        | 418,012        | 418,017          | 418,038        | 418,039        | 418,039        | 418,039        |
| 38             | W, W  | 208,830        | 208,766        | 208,788        | 208,823          | 208,788        | 208,830        | 208,817        | 208,830        |
| 39             | BN, D   | 321,143        | 321,143        | 321,144        | 321,143          | 321,143        | 321,143        | 321,143        | 321,143        |
| 40             | D, C  | 527,214        | 527,194        | 527,200        | 527,214          | 527,194        | 527,214        | 527,214        | 527,214        |
| 41             | C, C  | 666,963        | 666,963        | 666,963        | 666,963          | 666,963        | 666,963        | 666,920        | 666,963        |
| 42             | C, C  | 627,784        | 627,784        | 627,784        | 627,784          | 627,784        | 627,784        | 627,784        | 627,784        |
| <b>Average</b> |   | <b>391,433</b> | <b>391,433</b> | <b>391,425</b> | <b>391,437</b>   | <b>391,439</b> | <b>391,438</b> | <b>391,434</b> | <b>391,437</b> |
| <b>Maximum</b> |   | <b>666,963</b> | <b>666,963</b> | <b>666,963</b> | <b>666,963</b>   | <b>666,963</b> | <b>666,963</b> | <b>666,920</b> | <b>666,963</b> |
| <b>Minimum</b> |   | <b>203,714</b> | <b>203,698</b> | <b>203,699</b> | <b>203,714</b>   | <b>203,714</b> | <b>203,714</b> | <b>203,714</b> | <b>203,714</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-20. Simulated Groundwater Pumping in C2VSimFG Subregion 20 (SR20)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)  | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|-----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 794,423   | 794,423   | 794,422     | 794,423          | 794,423     | 794,423     | 794,423   | 794,423   |
| 2    | W, W  | 736,098   | 736,098   | 736,098     | 736,098          | 736,098     | 736,099     | 736,098   | 736,098   |
| 3    | C, C  | 1,019,061 | 1,019,056 | 1,019,061   | 1,019,052        | 1,019,061   | 1,019,060   | 1,019,084 | 1,019,059 |
| 4    | C, C  | 988,507   | 988,507   | 988,507     | 988,507          | 988,511     | 988,511     | 988,510   | 988,507   |
| 5    | AN, W   | 732,197   | 732,197   | 732,197     | 732,197          | 732,199     | 732,199     | 732,197   | 732,193   |
| 6    | BN, AN  | 700,263   | 700,268   | 700,263     | 700,263          | 700,265     | 700,265     | 700,259   | 700,245   |
| 7    | AN, W   | 714,926   | 714,931   | 714,797     | 714,926          | 714,924     | 714,924     | 714,791   | 714,927   |
| 8    | D, D  | 741,479   | 741,451   | 741,480     | 741,479          | 741,479     | 741,479     | 741,478   | 741,480   |
| 9    | W, W  | 713,883   | 713,883   | 713,883     | 713,838          | 713,883     | 713,883     | 713,886   | 713,882   |
| 10   | W, W  | 697,850   | 697,850   | 697,850     | 697,850          | 697,850     | 697,850     | 697,849   | 697,850   |
| 11   | W, AN   | 628,365   | 628,366   | 628,365     | 628,365          | 628,367     | 628,367     | 628,362   | 628,317   |
| 12   | D, D  | 615,056   | 615,018   | 615,056     | 615,056          | 615,054     | 615,054     | 615,032   | 615,056   |
| 13   | W, W  | 572,382   | 572,382   | 572,382     | 572,382          | 572,344     | 572,382     | 572,382   | 572,382   |
| 14   | D, D  | 798,348   | 798,344   | 798,345     | 798,248          | 798,289     | 798,350     | 798,361   | 798,202   |
| 15   | C, C  | 874,537   | 874,512   | 874,538     | 874,586          | 874,516     | 874,525     | 874,417   | 874,538   |
| 16   | D, C  | 869,562   | 869,634   | 869,666     | 869,567          | 869,668     | 869,667     | 869,583   | 869,596   |
| 17   | C, C  | 945,507   | 945,540   | 945,543     | 945,544          | 945,543     | 945,542     | 945,565   | 945,506   |
| 18   | C, C  | 821,014   | 821,008   | 821,015     | 821,013          | 821,014     | 821,018     | 821,029   | 821,014   |
| 19   | C, C  | 893,846   | 893,958   | 893,959     | 893,959          | 893,956     | 893,852     | 893,960   | 893,959   |
| 20   | AN, W   | 608,047   | 608,027   | 608,000     | 608,012          | 607,999     | 608,032     | 607,982   | 608,012   |
| 21   | C, C  | 749,790   | 749,733   | 749,783     | 749,784          | 749,785     | 749,790     | 749,777   | 749,771   |
| 22   | W, W  | 627,741   | 627,730   | 627,730     | 627,734          | 627,714     | 627,735     | 627,726   | 627,737   |
| 23   | W, W  | 656,761   | 656,780   | 656,759     | 656,759          | 656,756     | 656,758     | 656,738   | 656,762   |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)         | Alt1 (AF)        | Alt2v1 (AF)      | Alt2v1wTUCP (AF) | Alt2v2 (AF)      | Alt2v3 (AF)      | Alt3 (AF)        | Alt4 (AF)        |
|----------------|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 24             | W, W  | 628,109          | 628,155          | 628,131          | 628,121          | 628,129          | 628,114          | 628,067          | 628,130          |
| 25             | W, W  | 524,389          | 524,372          | 524,364          | 524,376          | 524,366          | 524,376          | 524,362          | 524,367          |
| 26             | W, AN   | 583,208          | 583,208          | 583,193          | 583,152          | 583,208          | 583,208          | 583,207          | 583,208          |
| 27             | AN, AN  | 655,908          | 655,909          | 655,908          | 655,908          | 655,908          | 655,908          | 655,908          | 655,909          |
| 28             | D, D  | 786,535          | 786,533          | 786,535          | 786,535          | 786,536          | 786,535          | 786,564          | 786,535          |
| 29             | D, D  | 886,429          | 886,428          | 886,429          | 886,428          | 886,429          | 886,429          | 886,419          | 886,428          |
| 30             | AN, BN  | 766,037          | 766,032          | 766,037          | 766,037          | 766,037          | 766,037          | 766,020          | 766,037          |
| 31             | BN, D   | 900,755          | 900,732          | 900,827          | 900,778          | 900,886          | 900,866          | 900,799          | 900,894          |
| 32             | AN, W   | 575,076          | 575,280          | 575,217          | 575,122          | 575,116          | 575,100          | 575,177          | 575,176          |
| 33             | W, W  | 544,666          | 544,545          | 544,524          | 544,611          | 544,526          | 544,596          | 544,461          | 544,527          |
| 34             | D, C  | 832,232          | 832,252          | 832,231          | 832,232          | 832,230          | 832,246          | 831,946          | 832,233          |
| 35             | C, C  | 813,589          | 813,655          | 813,609          | 813,609          | 813,606          | 813,605          | 813,680          | 813,610          |
| 36             | D, BN   | 787,419          | 787,501          | 787,420          | 787,420          | 787,418          | 787,418          | 787,406          | 787,423          |
| 37             | BN, AN  | 756,802          | 756,828          | 756,818          | 756,818          | 756,817          | 756,817          | 756,799          | 756,819          |
| 38             | W, W  | 577,243          | 577,249          | 577,245          | 577,245          | 577,245          | 577,208          | 577,202          | 577,245          |
| 39             | BN, D   | 776,169          | 776,090          | 776,114          | 776,170          | 776,162          | 776,168          | 776,150          | 776,171          |
| 40             | D, C  | 1,097,446        | 1,097,589        | 1,097,446        | 1,097,446        | 1,097,445        | 1,097,445        | 1,097,411        | 1,097,445        |
| 41             | C, C  | 1,131,382        | 1,131,373        | 1,131,396        | 1,131,397        | 1,131,386        | 1,131,395        | 1,131,381        | 1,131,401        |
| 42             | C, C  | 1,075,737        | 1,075,741        | 1,075,733        | 1,075,733        | 1,075,740        | 1,075,732        | 1,075,703        | 1,075,735        |
| <b>Average</b> |   | <b>766,637</b>   | <b>766,647</b>   | <b>766,640</b>   | <b>766,638</b>   | <b>766,640</b>   | <b>766,642</b>   | <b>766,623</b>   | <b>766,638</b>   |
| <b>Maximum</b> |   | <b>1,131,382</b> | <b>1,131,373</b> | <b>1,131,396</b> | <b>1,131,397</b> | <b>1,131,386</b> | <b>1,131,395</b> | <b>1,131,381</b> | <b>1,131,401</b> |
| <b>Minimum</b> |   | <b>524,389</b>   | <b>524,372</b>   | <b>524,364</b>   | <b>524,376</b>   | <b>524,366</b>   | <b>524,376</b>   | <b>524,362</b>   | <b>524,367</b>   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-21. Simulated Groundwater Pumping in C2VSimFG Subregion 21 (SR21)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 613,498  | 613,499   | 613,537     | 613,538          | 613,545     | 613,450     | 613,486   | 613,526   |
| 2    | W, W  | 528,275  | 528,274   | 528,278     | 528,226          | 528,121     | 528,274     | 528,296   | 528,256   |
| 3    | C, C  | 897,927  | 897,881   | 897,927     | 897,805          | 897,928     | 897,881     | 897,798   | 897,885   |
| 4    | C, C  | 968,741  | 968,776   | 968,670     | 968,722          | 968,644     | 968,718     | 968,667   | 968,698   |
| 5    | AN, W   | 596,065  | 596,044   | 596,186     | 596,264          | 596,030     | 596,142     | 595,953   | 596,279   |
| 6    | BN, AN  | 479,576  | 479,537   | 479,530     | 479,373          | 479,574     | 479,593     | 479,500   | 479,574   |
| 7    | AN, W   | 505,438  | 505,401   | 505,498     | 505,332          | 505,494     | 505,434     | 505,378   | 505,361   |
| 8    | D, D  | 586,233  | 586,269   | 586,253     | 586,250          | 586,272     | 586,244     | 586,270   | 586,264   |
| 9    | W, W  | 482,308  | 482,337   | 482,332     | 482,327          | 482,317     | 482,283     | 482,338   | 482,338   |
| 10   | W, W  | 440,099  | 440,098   | 440,060     | 440,048          | 440,080     | 440,084     | 440,098   | 440,041   |
| 11   | W, AN   | 493,674  | 493,641   | 493,702     | 493,683          | 493,684     | 493,682     | 493,683   | 493,702   |
| 12   | D, D  | 531,433  | 531,370   | 531,356     | 531,410          | 531,420     | 531,423     | 531,433   | 531,423   |
| 13   | W, W  | 462,656  | 462,552   | 462,632     | 462,645          | 462,551     | 462,656     | 462,592   | 462,620   |
| 14   | D, D  | 747,143  | 747,184   | 747,111     | 747,142          | 747,013     | 747,184     | 747,098   | 747,186   |
| 15   | C, C  | 821,783  | 821,893   | 822,064     | 821,992          | 821,902     | 821,792     | 822,073   | 822,001   |
| 16   | D, C  | 840,649  | 840,647   | 840,674     | 840,765          | 840,767     | 840,768     | 840,768   | 840,532   |
| 17   | C, C  | 900,834  | 900,817   | 900,694     | 900,766          | 900,786     | 900,726     | 900,658   | 900,707   |
| 18   | C, C  | 809,816  | 809,819   | 809,446     | 809,844          | 809,757     | 809,874     | 809,883   | 809,842   |
| 19   | C, C  | 892,312  | 892,206   | 892,414     | 892,330          | 892,504     | 892,381     | 892,186   | 892,501   |
| 20   | AN, W   | 628,926  | 628,918   | 628,879     | 629,001          | 629,012     | 628,969     | 628,819   | 628,951   |
| 21   | C, C  | 680,877  | 680,857   | 680,897     | 680,762          | 680,904     | 680,758     | 680,961   | 680,986   |
| 22   | W, W  | 493,627  | 493,502   | 493,628     | 493,667          | 493,628     | 493,656     | 493,628   | 493,627   |
| 23   | W, W  | 539,728  | 539,742   | 539,772     | 539,704          | 539,773     | 539,732     | 539,772   | 539,772   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)         | Alt1 (AF)        | Alt2v1 (AF)      | Alt2v1wTUCP (AF) | Alt2v2 (AF)      | Alt2v3 (AF)      | Alt3 (AF)        | Alt4 (AF)        |
|----------------|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 24             | W, W  | 507,720          | 507,772          | 507,749          | 507,754          | 507,737          | 507,711          | 507,774          | 507,746          |
| 25             | W, W  | 436,059          | 435,965          | 436,039          | 436,074          | 436,082          | 436,059          | 436,060          | 436,059          |
| 26             | W, AN   | 592,068          | 591,975          | 592,112          | 592,133          | 592,112          | 592,101          | 591,891          | 592,068          |
| 27             | AN, AN  | 677,307          | 677,377          | 677,337          | 677,402          | 677,409          | 677,390          | 677,478          | 677,415          |
| 28             | D, D  | 912,261          | 912,243          | 912,131          | 912,252          | 912,261          | 912,249          | 912,262          | 912,247          |
| 29             | D, D  | 977,900          | 977,911          | 977,899          | 977,909          | 977,912          | 977,897          | 977,908          | 977,881          |
| 30             | AN, BN  | 820,537          | 820,554          | 820,551          | 820,556          | 820,551          | 820,555          | 820,556          | 820,550          |
| 31             | BN, D   | 884,677          | 884,552          | 884,607          | 884,620          | 884,642          | 884,677          | 884,673          | 884,670          |
| 32             | AN, W   | 644,872          | 644,940          | 644,628          | 644,851          | 644,824          | 644,766          | 644,678          | 644,645          |
| 33             | W, W  | 515,556          | 515,554          | 515,598          | 515,598          | 515,538          | 515,549          | 515,659          | 515,550          |
| 34             | D, C  | 1,030,296        | 1,030,167        | 1,030,286        | 1,030,296        | 1,030,285        | 1,030,284        | 1,030,240        | 1,030,247        |
| 35             | C, C  | 1,205,455        | 1,205,546        | 1,205,499        | 1,205,497        | 1,205,494        | 1,205,458        | 1,205,491        | 1,205,499        |
| 36             | D, BN   | 1,131,802        | 1,131,833        | 1,131,834        | 1,131,835        | 1,131,836        | 1,131,834        | 1,131,834        | 1,131,834        |
| 37             | BN, AN  | 923,811          | 923,903          | 923,812          | 923,894          | 923,794          | 923,896          | 923,908          | 923,809          |
| 38             | W, W  | 485,576          | 485,705          | 485,710          | 485,538          | 485,712          | 485,710          | 485,711          | 485,613          |
| 39             | BN, D   | 782,624          | 782,522          | 782,572          | 782,541          | 782,568          | 782,572          | 782,573          | 782,461          |
| 40             | D, C  | 1,243,201        | 1,243,188        | 1,243,202        | 1,243,193        | 1,243,174        | 1,243,202        | 1,243,204        | 1,243,227        |
| 41             | C, C  | 1,462,160        | 1,462,177        | 1,462,167        | 1,462,127        | 1,462,165        | 1,462,165        | 1,462,136        | 1,462,168        |
| 42             | C, C  | 1,390,530        | 1,390,533        | 1,390,536        | 1,390,545        | 1,390,545        | 1,390,534        | 1,390,545        | 1,390,533        |
| <b>Average</b> |   | <b>751,572</b>   | <b>751,564</b>   | <b>751,567</b>   | <b>751,576</b>   | <b>751,580</b>   | <b>751,579</b>   | <b>751,570</b>   | <b>751,578</b>   |
| <b>Maximum</b> |   | <b>1,462,160</b> | <b>1,462,177</b> | <b>1,462,167</b> | <b>1,462,127</b> | <b>1,462,165</b> | <b>1,462,165</b> | <b>1,462,136</b> | <b>1,462,168</b> |
| <b>Minimum</b> |   | <b>436,059</b>   | <b>435,965</b>   | <b>436,039</b>   | <b>436,074</b>   | <b>436,082</b>   | <b>436,059</b>   | <b>436,060</b>   | <b>436,059</b>   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

### I-1.1.2 Changes in Groundwater Pumping, Alternative 1 Compared to No Action Alternative

Table I.1-22 through Table I.1-42 provide the annual simulated groundwater pumping through the model simulation period for each of the 21 model subregions for Alternative 1 compared to the No Action Alternative.

Table I.1-22. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 1 (SR1) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 55                  | 0.1%                          |
| 2    | W, W  | -78                 | -0.1%                         |
| 3    | C, C  | -155                | -0.3%                         |
| 4    | C, C  | 1,806               | 2.4%                          |
| 5    | AN, W   | 1,498               | 2.5%                          |
| 6    | BN, AN  | -775                | -1.3%                         |
| 7    | AN, W   | -104                | -0.2%                         |
| 8    | D, D  | -608                | -1.0%                         |
| 9    | W, W  | 60                  | 0.1%                          |
| 10   | W, W  | 54                  | 0.1%                          |
| 11   | W, AN   | 62                  | 0.1%                          |
| 12   | D, D  | 172                 | 0.3%                          |
| 13   | W, W  | -77                 | -0.1%                         |
| 14   | D, D  | -956                | -1.3%                         |
| 15   | C, C  | -2,652              | -3.5%                         |
| 16   | D, C  | -1,422              | -2.0%                         |
| 17   | C, C  | -924                | -1.3%                         |
| 18   | C, C  | -293                | -0.4%                         |
| 19   | C, C  | 606                 | 0.7%                          |
| 20   | AN, W   | 355                 | 0.6%                          |
| 21   | C, C  | -47                 | -0.1%                         |
| 22   | W, W  | 17                  | 0.0%                          |
| 23   | W, W  | -22                 | 0.0%                          |
| 24   | W, W  | -136                | -0.2%                         |
| 25   | W, W  | 47                  | 0.1%                          |
| 26   | W, AN   | -89                 | -0.1%                         |
| 27   | AN, AN  | -86                 | -0.1%                         |
| 28   | D, D  | -380                | -0.6%                         |
| 29   | D, D  | 120                 | 0.2%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 30             | AN, BN  | 78                  | 0.1%                          |
| 31             | BN, D   | 49                  | 0.1%                          |
| 32             | AN, W   | -68                 | -0.1%                         |
| 33             | W, W  | -14                 | 0.0%                          |
| 34             | D, C  | 214                 | 0.3%                          |
| 35             | C, C  | -1,566              | -2.2%                         |
| 36             | D, BN   | -1,806              | -2.6%                         |
| 37             | BN, AN  | -347                | -0.6%                         |
| 38             | W, W  | -69                 | -0.1%                         |
| 39             | BN, D   | 23                  | 0.0%                          |
| 40             | D, C  | -339                | -0.5%                         |
| 41             | C, C  | -58                 | -0.1%                         |
| 42             | C, C  | -190                | -0.2%                         |
| <b>Average</b> |   | <b>-192</b>         | <b>-0.3%</b>                  |
| <b>Maximum</b> |   | <b>1,806</b>        | <b>2.5%</b>                   |
| <b>Minimum</b> |   | <b>-2,652</b>       | <b>-3.5%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.

Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-23. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 2 (SR2) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 4                   | 0.0%                          |
| 2    | W, W  | -5                  | 0.0%                          |
| 3    | C, C  | -193                | 0.0%                          |
| 4    | C, C  | -703                | -0.1%                         |
| 5    | AN, W   | 4,709               | 0.9%                          |
| 6    | BN, AN  | -6,595              | -1.2%                         |
| 7    | AN, W   | -1,438              | -0.3%                         |
| 8    | D, D  | -1,244              | -0.2%                         |
| 9    | W, W  | -190                | 0.0%                          |
| 10   | W, W  | -9                  | 0.0%                          |
| 11   | W, AN   | -5                  | 0.0%                          |
| 12   | D, D  | 148                 | 0.0%                          |
| 13   | W, W  | -302                | -0.1%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 14             | D, D  | -3,481              | -0.6%                         |
| 15             | C, C  | -6,516              | -1.1%                         |
| 16             | D, C  | -8,079              | -1.4%                         |
| 17             | C, C  | -4,510              | -0.9%                         |
| 18             | C, C  | -1,058              | -0.2%                         |
| 19             | C, C  | 212                 | 0.0%                          |
| 20             | AN, W   | 70                  | 0.0%                          |
| 21             | C, C  | -868                | -0.2%                         |
| 22             | W, W  | -230                | 0.0%                          |
| 23             | W, W  | -14                 | 0.0%                          |
| 24             | W, W  | -4                  | 0.0%                          |
| 25             | W, W  | -9                  | 0.0%                          |
| 26             | W, AN   | 0                   | 0.0%                          |
| 27             | AN, AN  | -1                  | 0.0%                          |
| 28             | D, D  | -3,511              | -0.7%                         |
| 29             | D, D  | -452                | -0.1%                         |
| 30             | AN, BN  | 132                 | 0.0%                          |
| 31             | BN, D   | -861                | -0.2%                         |
| 32             | AN, W   | -102                | 0.0%                          |
| 33             | W, W  | 5                   | 0.0%                          |
| 34             | D, C  | 380                 | 0.1%                          |
| 35             | C, C  | -2,199              | -0.4%                         |
| 36             | D, BN   | -3,837              | -0.7%                         |
| 37             | BN, AN  | -520                | -0.1%                         |
| 38             | W, W  | 4                   | 0.0%                          |
| 39             | BN, D   | -102                | 0.0%                          |
| 40             | D, C  | -3,416              | -0.5%                         |
| 41             | C, C  | -860                | -0.1%                         |
| 42             | C, C  | 3,744               | 0.6%                          |
| <b>Average</b> |   | <b>-998</b>         | <b>-0.2%</b>                  |
| <b>Maximum</b> |   | <b>4,709</b>        | <b>0.9%</b>                   |
| <b>Minimum</b> |   | <b>-8,079</b>       | <b>-1.4%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-24. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 3 (SR3) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 0                   | 0.0%                          |
| 2    | W, W  | 0                   | 0.0%                          |
| 3    | C, C  | -971                | -0.2%                         |
| 4    | C, C  | 8,890               | 1.5%                          |
| 5    | AN, W   | 2,372               | 0.7%                          |
| 6    | BN, AN  | -35,538             | -9.4%                         |
| 7    | AN, W   | -6,819              | -2.2%                         |
| 8    | D, D  | -5,839              | -1.6%                         |
| 9    | W, W  | -1,198              | -0.5%                         |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | -7                  | 0.0%                          |
| 12   | D, D  | 765                 | 0.2%                          |
| 13   | W, W  | -4,223              | -1.2%                         |
| 14   | D, D  | -18,626             | -4.4%                         |
| 15   | C, C  | -32,795             | -7.3%                         |
| 16   | D, C  | -40,023             | -9.9%                         |
| 17   | C, C  | -19,801             | -4.2%                         |
| 18   | C, C  | -3,236              | -0.6%                         |
| 19   | C, C  | 2,796               | 0.5%                          |
| 20   | AN, W   | 992                 | 0.3%                          |
| 21   | C, C  | -4,992              | -1.2%                         |
| 22   | W, W  | -1,066              | -0.3%                         |
| 23   | W, W  | -66                 | 0.0%                          |
| 24   | W, W  | -55                 | 0.0%                          |
| 25   | W, W  | -3                  | 0.0%                          |
| 26   | W, AN   | 13                  | 0.0%                          |
| 27   | AN, AN  | 0                   | 0.0%                          |
| 28   | D, D  | -19,054             | -5.2%                         |
| 29   | D, D  | -6,813              | -1.9%                         |
| 30   | AN, BN  | -266                | -0.1%                         |
| 31   | BN, D   | -12,820             | -3.7%                         |
| 32   | AN, W   | -1,997              | -0.7%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -44                 | 0.0%                          |
| 34             | D, C  | 4,888               | 1.4%                          |
| 35             | C, C  | -12,225             | -3.0%                         |
| 36             | D, BN   | -19,875             | -4.4%                         |
| 37             | BN, AN  | -2,490              | -0.9%                         |
| 38             | W, W  | -225                | -0.1%                         |
| 39             | BN, D   | -967                | -0.3%                         |
| 40             | D, C  | -17,648             | -4.3%                         |
| 41             | C, C  | -3,764              | -0.6%                         |
| 42             | C, C  | 1,154               | 0.2%                          |
| <b>Average</b> |   | <b>-5,990</b>       | <b>-1.5%</b>                  |
| <b>Maximum</b> |   | <b>8,890</b>        | <b>1.5%</b>                   |
| <b>Minimum</b> |   | <b>-40,023</b>      | <b>-9.9%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-25. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 4 (SR4) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 0                   | 0.0%                          |
| 2    | W, W  | -7,897              | -2.3%                         |
| 3    | C, C  | 1,041               | 0.3%                          |
| 4    | C, C  | 3,254               | 0.9%                          |
| 5    | AN, W   | 62                  | 0.0%                          |
| 6    | BN, AN  | 1,209               | 0.4%                          |
| 7    | AN, W   | -7,284              | -2.3%                         |
| 8    | D, D  | -38                 | 0.0%                          |
| 9    | W, W  | 8,642               | 2.9%                          |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | 10                  | 0.0%                          |
| 12   | D, D  | 1                   | 0.0%                          |
| 13   | W, W  | -11                 | 0.0%                          |
| 14   | D, D  | -1,928              | -0.5%                         |
| 15   | C, C  | 719                 | 0.2%                          |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 39                  | 0.0%                          |
| 17             | C, C  | 84                  | 0.0%                          |
| 18             | C, C  | 1,869               | 0.6%                          |
| 19             | C, C  | -287                | -0.1%                         |
| 20             | AN, W   | -2,407              | -0.7%                         |
| 21             | C, C  | -1,069              | -0.3%                         |
| 22             | W, W  | -2                  | 0.0%                          |
| 23             | W, W  | -1,353              | -0.4%                         |
| 24             | W, W  | 0                   | 0.0%                          |
| 25             | W, W  | 0                   | 0.0%                          |
| 26             | W, AN   | -12                 | 0.0%                          |
| 27             | AN, AN  | 2,510               | 0.8%                          |
| 28             | D, D  | -14                 | 0.0%                          |
| 29             | D, D  | -5                  | 0.0%                          |
| 30             | AN, BN  | 1,486               | 0.5%                          |
| 31             | BN, D   | 1,379               | 0.4%                          |
| 32             | AN, W   | -12                 | 0.0%                          |
| 33             | W, W  | -2,520              | -0.8%                         |
| 34             | D, C  | 13                  | 0.0%                          |
| 35             | C, C  | -19                 | 0.0%                          |
| 36             | D, BN   | -40                 | 0.0%                          |
| 37             | BN, AN  | -24                 | 0.0%                          |
| 38             | W, W  | 1,106               | 0.3%                          |
| 39             | BN, D   | 25                  | 0.0%                          |
| 40             | D, C  | -49                 | 0.0%                          |
| 41             | C, C  | -16                 | 0.0%                          |
| 42             | C, C  | 2,451               | 0.7%                          |
| <b>Average</b> |   | <b>22</b>           | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>8,642</b>        | <b>2.9%</b>                   |
| <b>Minimum</b> |   | <b>-7,897</b>       | <b>-2.3%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-26. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 5 (SR5) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 30                  | 0.0%                          |
| 2    | W, W  | 83                  | 0.0%                          |
| 3    | C, C  | -218                | 0.0%                          |
| 4    | C, C  | 456                 | 0.1%                          |
| 5    | AN, W   | 2,201               | 0.5%                          |
| 6    | BN, AN  | -2,538              | -0.6%                         |
| 7    | AN, W   | -293                | -0.1%                         |
| 8    | D, D  | -1,027              | -0.2%                         |
| 9    | W, W  | -173                | 0.0%                          |
| 10   | W, W  | 75                  | 0.0%                          |
| 11   | W, AN   | -64                 | 0.0%                          |
| 12   | D, D  | 216                 | 0.0%                          |
| 13   | W, W  | -583                | -0.1%                         |
| 14   | D, D  | -1,430              | -0.3%                         |
| 15   | C, C  | -2,732              | -0.6%                         |
| 16   | D, C  | -13,847             | -3.0%                         |
| 17   | C, C  | -1,047              | -0.3%                         |
| 18   | C, C  | -1,126              | -0.2%                         |
| 19   | C, C  | 6,256               | 1.2%                          |
| 20   | AN, W   | 2,008               | 0.5%                          |
| 21   | C, C  | -344                | -0.1%                         |
| 22   | W, W  | -36                 | 0.0%                          |
| 23   | W, W  | 4                   | 0.0%                          |
| 24   | W, W  | 232                 | 0.1%                          |
| 25   | W, W  | 109                 | 0.0%                          |
| 26   | W, AN   | -34                 | 0.0%                          |
| 27   | AN, AN  | 106                 | 0.0%                          |
| 28   | D, D  | -1,358              | -0.3%                         |
| 29   | D, D  | -693                | -0.1%                         |
| 30   | AN, BN  | -174                | 0.0%                          |
| 31   | BN, D   | 17                  | 0.0%                          |
| 32   | AN, W   | 161                 | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -42                 | 0.0%                          |
| 34             | D, C  | 213                 | 0.0%                          |
| 35             | C, C  | -890                | -0.2%                         |
| 36             | D, BN   | -2,567              | -0.5%                         |
| 37             | BN, AN  | -444                | -0.1%                         |
| 38             | W, W  | -147                | 0.0%                          |
| 39             | BN, D   | 269                 | 0.1%                          |
| 40             | D, C  | -1,177              | -0.2%                         |
| 41             | C, C  | -1,274              | -0.2%                         |
| 42             | C, C  | 28                  | 0.0%                          |
| <b>Average</b> |   | <b>-519</b>         | <b>-0.1%</b>                  |
| <b>Maximum</b> |   | <b>6,256</b>        | <b>1.2%</b>                   |
| <b>Minimum</b> |   | <b>-13,847</b>      | <b>-3.0%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-27. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 6 (SR6) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -175                | 0.0%                          |
| 2    | W, W  | 798                 | 0.1%                          |
| 3    | C, C  | -394                | 0.0%                          |
| 4    | C, C  | -711                | -0.1%                         |
| 5    | AN, W   | -71                 | 0.0%                          |
| 6    | BN, AN  | -748                | -0.1%                         |
| 7    | AN, W   | -195                | 0.0%                          |
| 8    | D, D  | 660                 | 0.1%                          |
| 9    | W, W  | 767                 | 0.1%                          |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | -2,776              | -0.4%                         |
| 12   | D, D  | -746                | -0.1%                         |
| 13   | W, W  | -279                | 0.0%                          |
| 14   | D, D  | 3,319               | 0.4%                          |
| 15   | C, C  | -765                | -0.1%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -950                | -0.1%                         |
| 17             | C, C  | -3,048              | -0.4%                         |
| 18             | C, C  | -2,285              | -0.3%                         |
| 19             | C, C  | 1,061               | 0.1%                          |
| 20             | AN, W   | 468                 | 0.1%                          |
| 21             | C, C  | -400                | 0.0%                          |
| 22             | W, W  | 21                  | 0.0%                          |
| 23             | W, W  | 392                 | 0.1%                          |
| 24             | W, W  | -1,871              | -0.3%                         |
| 25             | W, W  | 296                 | 0.0%                          |
| 26             | W, AN   | -754                | -0.1%                         |
| 27             | AN, AN  | -65                 | 0.0%                          |
| 28             | D, D  | 5                   | 0.0%                          |
| 29             | D, D  | -473                | -0.1%                         |
| 30             | AN, BN  | 4,139               | 0.6%                          |
| 31             | BN, D   | 686                 | 0.1%                          |
| 32             | AN, W   | -28                 | 0.0%                          |
| 33             | W, W  | 666                 | 0.1%                          |
| 34             | D, C  | -885                | -0.1%                         |
| 35             | C, C  | -461                | -0.1%                         |
| 36             | D, BN   | -2,574              | -0.3%                         |
| 37             | BN, AN  | -532                | -0.1%                         |
| 38             | W, W  | 597                 | 0.1%                          |
| 39             | BN, D   | -304                | 0.0%                          |
| 40             | D, C  | -858                | -0.1%                         |
| 41             | C, C  | -1,973              | -0.2%                         |
| 42             | C, C  | 1,395               | 0.2%                          |
| <b>Average</b> |   | <b>-215</b>         | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>4,139</b>        | <b>0.6%</b>                   |
| <b>Minimum</b> |   | <b>-3,048</b>       | <b>-0.4%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-28. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 7 (SR7) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 530                 | 0.2%                          |
| 2    | W, W  | 339                 | 0.1%                          |
| 3    | C, C  | -22                 | 0.0%                          |
| 4    | C, C  | -82                 | 0.0%                          |
| 5    | AN, W   | 13,666              | 3.6%                          |
| 6    | BN, AN  | 719                 | 0.2%                          |
| 7    | AN, W   | -2,455              | -0.7%                         |
| 8    | D, D  | 25                  | 0.0%                          |
| 9    | W, W  | -435                | -0.1%                         |
| 10   | W, W  | -441                | -0.1%                         |
| 11   | W, AN   | 731                 | 0.2%                          |
| 12   | D, D  | 293                 | 0.1%                          |
| 13   | W, W  | 1,045               | 0.3%                          |
| 14   | D, D  | -399                | -0.1%                         |
| 15   | C, C  | -257                | -0.1%                         |
| 16   | D, C  | -101                | 0.0%                          |
| 17   | C, C  | -925                | -0.3%                         |
| 18   | C, C  | 2,062               | 0.5%                          |
| 19   | C, C  | -237                | -0.1%                         |
| 20   | AN, W   | 1,021               | 0.3%                          |
| 21   | C, C  | -17                 | 0.0%                          |
| 22   | W, W  | -332                | -0.1%                         |
| 23   | W, W  | 131                 | 0.0%                          |
| 24   | W, W  | -490                | -0.1%                         |
| 25   | W, W  | 888                 | 0.3%                          |
| 26   | W, AN   | 728                 | 0.2%                          |
| 27   | AN, AN  | -518                | -0.1%                         |
| 28   | D, D  | -96                 | 0.0%                          |
| 29   | D, D  | -184                | 0.0%                          |
| 30   | AN, BN  | -27                 | 0.0%                          |
| 31   | BN, D   | -170                | 0.0%                          |
| 32   | AN, W   | -2,733              | -0.7%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -1,113              | -0.3%                         |
| 34             | D, C  | -1,201              | -0.3%                         |
| 35             | C, C  | -438                | -0.1%                         |
| 36             | D, BN   | -140                | 0.0%                          |
| 37             | BN, AN  | 74                  | 0.0%                          |
| 38             | W, W  | -1,590              | -0.4%                         |
| 39             | BN, D   | 114                 | 0.0%                          |
| 40             | D, C  | -243                | -0.1%                         |
| 41             | C, C  | -72                 | 0.0%                          |
| 42             | C, C  | 593                 | 0.1%                          |
| <b>Average</b> |   | <b>196</b>          | <b>0.1%</b>                   |
| <b>Maximum</b> |   | <b>13,666</b>       | <b>3.6%</b>                   |
| <b>Minimum</b> |   | <b>-2,733</b>       | <b>-0.7%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-29. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 8 (SR8) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 932                 | 0.1%                          |
| 2    | W, W  | -573                | -0.1%                         |
| 3    | C, C  | 2,800               | 0.2%                          |
| 4    | C, C  | -92                 | 0.0%                          |
| 5    | AN, W   | -399                | 0.0%                          |
| 6    | BN, AN  | 0                   | 0.0%                          |
| 7    | AN, W   | 61                  | 0.0%                          |
| 8    | D, D  | -27                 | 0.0%                          |
| 9    | W, W  | 281                 | 0.0%                          |
| 10   | W, W  | -13                 | 0.0%                          |
| 11   | W, AN   | -42                 | 0.0%                          |
| 12   | D, D  | 28                  | 0.0%                          |
| 13   | W, W  | -218                | 0.0%                          |
| 14   | D, D  | -68                 | 0.0%                          |
| 15   | C, C  | 279                 | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 10                  | 0.0%                          |
| 17             | C, C  | -397                | 0.0%                          |
| 18             | C, C  | -303                | 0.0%                          |
| 19             | C, C  | -468                | 0.0%                          |
| 20             | AN, W   | -74                 | 0.0%                          |
| 21             | C, C  | -770                | -0.1%                         |
| 22             | W, W  | 116                 | 0.0%                          |
| 23             | W, W  | -2,386              | -0.3%                         |
| 24             | W, W  | -1,666              | -0.2%                         |
| 25             | W, W  | -150                | 0.0%                          |
| 26             | W, AN   | 110                 | 0.0%                          |
| 27             | AN, AN  | 232                 | 0.0%                          |
| 28             | D, D  | -228                | 0.0%                          |
| 29             | D, D  | 270                 | 0.0%                          |
| 30             | AN, BN  | 137                 | 0.0%                          |
| 31             | BN, D   | 267                 | 0.0%                          |
| 32             | AN, W   | 46                  | 0.0%                          |
| 33             | W, W  | 439                 | 0.0%                          |
| 34             | D, C  | 333                 | 0.0%                          |
| 35             | C, C  | -109                | 0.0%                          |
| 36             | D, BN   | 174                 | 0.0%                          |
| 37             | BN, AN  | -55                 | 0.0%                          |
| 38             | W, W  | -185                | 0.0%                          |
| 39             | BN, D   | 1,079               | 0.1%                          |
| 40             | D, C  | 421                 | 0.0%                          |
| 41             | C, C  | -208                | 0.0%                          |
| 42             | C, C  | 117                 | 0.0%                          |
| <b>Average</b> |   | <b>-7</b>           | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>2,800</b>        | <b>0.2%</b>                   |
| <b>Minimum</b> |   | <b>-2,386</b>       | <b>-0.3%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-30. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 9 (SR9) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -1,183              | -0.3%                         |
| 2    | W, W  | -3,995              | -0.8%                         |
| 3    | C, C  | -1,046              | -0.2%                         |
| 4    | C, C  | -341                | -0.1%                         |
| 5    | AN, W   | -7,173              | -1.4%                         |
| 6    | BN, AN  | -3,757              | -0.7%                         |
| 7    | AN, W   | -648                | -0.1%                         |
| 8    | D, D  | -6,276              | -1.1%                         |
| 9    | W, W  | -1,105              | -0.2%                         |
| 10   | W, W  | -112                | 0.0%                          |
| 11   | W, AN   | -1,001              | -0.2%                         |
| 12   | D, D  | -1,933              | -0.3%                         |
| 13   | W, W  | -965                | -0.2%                         |
| 14   | D, D  | -2,485              | -0.5%                         |
| 15   | C, C  | -2,654              | -0.5%                         |
| 16   | D, C  | -1,251              | -0.2%                         |
| 17   | C, C  | -3,270              | -0.6%                         |
| 18   | C, C  | -2,428              | -0.5%                         |
| 19   | C, C  | -4,229              | -0.7%                         |
| 20   | AN, W   | -5,127              | -1.0%                         |
| 21   | C, C  | -3,986              | -0.7%                         |
| 22   | W, W  | -1,122              | -0.2%                         |
| 23   | W, W  | -130                | 0.0%                          |
| 24   | W, W  | -4,021              | -0.8%                         |
| 25   | W, W  | -79                 | 0.0%                          |
| 26   | W, AN   | -307                | -0.1%                         |
| 27   | AN, AN  | -5,131              | -1.0%                         |
| 28   | D, D  | -4,742              | -0.9%                         |
| 29   | D, D  | -2,435              | -0.5%                         |
| 30   | AN, BN  | -3,953              | -0.8%                         |
| 31   | BN, D   | -8,571              | -1.6%                         |
| 32   | AN, W   | -1,490              | -0.3%                         |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -278                | -0.1%                         |
| 34             | D, C  | -1,584              | -0.3%                         |
| 35             | C, C  | -2,001              | -0.4%                         |
| 36             | D, BN   | -1,814              | -0.3%                         |
| 37             | BN, AN  | -965                | -0.2%                         |
| 38             | W, W  | -305                | -0.1%                         |
| 39             | BN, D   | -955                | -0.2%                         |
| 40             | D, C  | -720                | -0.1%                         |
| 41             | C, C  | -367                | -0.1%                         |
| 42             | C, C  | -1,005              | -0.2%                         |
| <b>Average</b> |   | <b>-2,308</b>       | <b>-0.4%</b>                  |
| <b>Maximum</b> |   | <b>-79</b>          | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-8,571</b>       | <b>-1.6%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-31. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 10 (SR10) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -17,541             | -6.1%                         |
| 2    | W, W  | -54,827             | -14.8%                        |
| 3    | C, C  | -21,104             | -4.1%                         |
| 4    | C, C  | -103,266            | -12.7%                        |
| 5    | AN, W   | -2,158              | -0.6%                         |
| 6    | BN, AN  | -45,130             | -11.2%                        |
| 7    | AN, W   | -12,326             | -4.1%                         |
| 8    | D, D  | -74,909             | -16.9%                        |
| 9    | W, W  | -17,776             | -6.0%                         |
| 10   | W, W  | -513                | -0.2%                         |
| 11   | W, AN   | -8,719              | -2.8%                         |
| 12   | D, D  | -23,824             | -5.3%                         |
| 13   | W, W  | -5,891              | -1.9%                         |
| 14   | D, D  | -30,450             | -6.7%                         |
| 15   | C, C  | -33,991             | -6.5%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -20,069             | -3.7%                         |
| 17             | C, C  | -39,639             | -6.4%                         |
| 18             | C, C  | -29,080             | -3.8%                         |
| 19             | C, C  | -23,378             | -3.1%                         |
| 20             | AN, W   | -45,432             | -10.9%                        |
| 21             | C, C  | -50,662             | -9.2%                         |
| 22             | W, W  | -9,653              | -2.8%                         |
| 23             | W, W  | -1,412              | -0.4%                         |
| 24             | W, W  | -37,807             | -12.2%                        |
| 25             | W, W  | -312                | -0.1%                         |
| 26             | W, AN   | -3,886              | -1.4%                         |
| 27             | AN, AN  | -64,060             | -16.2%                        |
| 28             | D, D  | -59,413             | -12.8%                        |
| 29             | D, D  | -28,793             | -6.1%                         |
| 30             | AN, BN  | -43,324             | -10.1%                        |
| 31             | BN, D   | -88,374             | -18.8%                        |
| 32             | AN, W   | -19,856             | -6.5%                         |
| 33             | W, W  | -6,085              | -2.1%                         |
| 34             | D, C  | -38,562             | -9.2%                         |
| 35             | C, C  | -22,332             | -4.6%                         |
| 36             | D, BN   | -20,324             | -3.6%                         |
| 37             | BN, AN  | -19,370             | -4.5%                         |
| 38             | W, W  | -5,274              | -1.8%                         |
| 39             | BN, D   | -26,825             | -7.0%                         |
| 40             | D, C  | -14,161             | -3.1%                         |
| 41             | C, C  | -74,969             | -9.7%                         |
| 42             | C, C  | -6,061              | -0.8%                         |
| <b>Average</b> |   | <b>-29,798</b>      | <b>-6.5%</b>                  |
| <b>Maximum</b> |   | <b>-312</b>         | <b>-0.1%</b>                  |
| <b>Minimum</b> |   | <b>-103,266</b>     | <b>-18.8%</b>                 |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-32. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 11 (SR11) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -17                 | 0.0%                          |
| 2    | W, W  | -9                  | 0.0%                          |
| 3    | C, C  | -13,487             | -3.2%                         |
| 4    | C, C  | -5,465              | -0.9%                         |
| 5    | AN, W   | 66                  | 0.0%                          |
| 6    | BN, AN  | -40                 | 0.0%                          |
| 7    | AN, W   | 12,449              | 4.1%                          |
| 8    | D, D  | -3,314              | -0.9%                         |
| 9    | W, W  | 5                   | 0.0%                          |
| 10   | W, W  | 14                  | 0.0%                          |
| 11   | W, AN   | -34                 | 0.0%                          |
| 12   | D, D  | -2                  | 0.0%                          |
| 13   | W, W  | -5                  | 0.0%                          |
| 14   | D, D  | -28                 | 0.0%                          |
| 15   | C, C  | 410                 | 0.1%                          |
| 16   | D, C  | -27                 | 0.0%                          |
| 17   | C, C  | 124                 | 0.0%                          |
| 18   | C, C  | 111                 | 0.0%                          |
| 19   | C, C  | -324                | -0.1%                         |
| 20   | AN, W   | -6,541              | -1.9%                         |
| 21   | C, C  | 1,350               | 0.3%                          |
| 22   | W, W  | -1,044              | -0.4%                         |
| 23   | W, W  | 993                 | 0.3%                          |
| 24   | W, W  | 10,097              | 3.1%                          |
| 25   | W, W  | 7,599               | 3.1%                          |
| 26   | W, AN   | -203                | -0.1%                         |
| 27   | AN, AN  | 49                  | 0.0%                          |
| 28   | D, D  | 156                 | 0.0%                          |
| 29   | D, D  | 23                  | 0.0%                          |
| 30   | AN, BN  | 97                  | 0.0%                          |
| 31   | BN, D   | -60                 | 0.0%                          |
| 32   | AN, W   | 11                  | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 154                 | 0.1%                          |
| 34             | D, C  | 1,988               | 0.5%                          |
| 35             | C, C  | -387                | -0.1%                         |
| 36             | D, BN   | -132                | 0.0%                          |
| 37             | BN, AN  | -97                 | 0.0%                          |
| 38             | W, W  | 4,339               | 1.6%                          |
| 39             | BN, D   | -214                | -0.1%                         |
| 40             | D, C  | 69                  | 0.0%                          |
| 41             | C, C  | -417                | -0.1%                         |
| 42             | C, C  | -187                | 0.0%                          |
| <b>Average</b> |   | <b>192</b>          | <b>0.1%</b>                   |
| <b>Maximum</b> |   | <b>12,449</b>       | <b>4.1%</b>                   |
| <b>Minimum</b> |   | <b>-13,487</b>      | <b>-3.2%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-33. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 12 (SR12) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -24                 | 0.0%                          |
| 2    | W, W  | -90                 | 0.0%                          |
| 3    | C, C  | -68                 | 0.0%                          |
| 4    | C, C  | -117                | 0.0%                          |
| 5    | AN, W   | 106                 | 0.0%                          |
| 6    | BN, AN  | -38                 | 0.0%                          |
| 7    | AN, W   | -12                 | 0.0%                          |
| 8    | D, D  | -187                | 0.0%                          |
| 9    | W, W  | -89                 | 0.0%                          |
| 10   | W, W  | -11                 | 0.0%                          |
| 11   | W, AN   | -181                | 0.0%                          |
| 12   | D, D  | 25                  | 0.0%                          |
| 13   | W, W  | 14                  | 0.0%                          |
| 14   | D, D  | -71                 | 0.0%                          |
| 15   | C, C  | 132                 | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 21                  | 0.0%                          |
| 17             | C, C  | -240                | 0.0%                          |
| 18             | C, C  | -162                | 0.0%                          |
| 19             | C, C  | -237                | 0.0%                          |
| 20             | AN, W   | -19,306             | -3.2%                         |
| 21             | C, C  | 4,382               | 0.6%                          |
| 22             | W, W  | 1,760               | 0.4%                          |
| 23             | W, W  | -77                 | 0.0%                          |
| 24             | W, W  | 5                   | 0.0%                          |
| 25             | W, W  | -73                 | 0.0%                          |
| 26             | W, AN   | -59                 | 0.0%                          |
| 27             | AN, AN  | -75                 | 0.0%                          |
| 28             | D, D  | -59                 | 0.0%                          |
| 29             | D, D  | -76                 | 0.0%                          |
| 30             | AN, BN  | 29                  | 0.0%                          |
| 31             | BN, D   | -116                | 0.0%                          |
| 32             | AN, W   | 228                 | 0.1%                          |
| 33             | W, W  | 0                   | 0.0%                          |
| 34             | D, C  | -76                 | 0.0%                          |
| 35             | C, C  | 20                  | 0.0%                          |
| 36             | D, BN   | -101                | 0.0%                          |
| 37             | BN, AN  | 35                  | 0.0%                          |
| 38             | W, W  | 43                  | 0.0%                          |
| 39             | BN, D   | -78                 | 0.0%                          |
| 40             | D, C  | -93                 | 0.0%                          |
| 41             | C, C  | -452                | -0.1%                         |
| 42             | C, C  | 464                 | 0.1%                          |
| <b>Average</b> |   | <b>-355</b>         | <b>-0.1%</b>                  |
| <b>Maximum</b> |   | <b>4,382</b>        | <b>0.6%</b>                   |
| <b>Minimum</b> |   | <b>-19,306</b>      | <b>-3.2%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-34. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 13 (SR13) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 500                 | 0.0%                          |
| 2    | W, W  | -419                | 0.0%                          |
| 3    | C, C  | -233                | 0.0%                          |
| 4    | C, C  | -9,229              | -0.4%                         |
| 5    | AN, W   | -773                | 0.0%                          |
| 6    | BN, AN  | 203                 | 0.0%                          |
| 7    | AN, W   | -73                 | 0.0%                          |
| 8    | D, D  | -195                | 0.0%                          |
| 9    | W, W  | -439                | 0.0%                          |
| 10   | W, W  | 36                  | 0.0%                          |
| 11   | W, AN   | -40                 | 0.0%                          |
| 12   | D, D  | -1,408              | -0.1%                         |
| 13   | W, W  | 103                 | 0.0%                          |
| 14   | D, D  | -318                | 0.0%                          |
| 15   | C, C  | -521                | 0.0%                          |
| 16   | D, C  | -54                 | 0.0%                          |
| 17   | C, C  | -800                | 0.0%                          |
| 18   | C, C  | -818                | 0.0%                          |
| 19   | C, C  | 263                 | 0.0%                          |
| 20   | AN, W   | 321                 | 0.0%                          |
| 21   | C, C  | 613                 | 0.0%                          |
| 22   | W, W  | 19                  | 0.0%                          |
| 23   | W, W  | 170                 | 0.0%                          |
| 24   | W, W  | -270                | 0.0%                          |
| 25   | W, W  | -412                | 0.0%                          |
| 26   | W, AN   | -219                | 0.0%                          |
| 27   | AN, AN  | -154                | 0.0%                          |
| 28   | D, D  | -287                | 0.0%                          |
| 29   | D, D  | -745                | 0.0%                          |
| 30   | AN, BN  | -804                | 0.0%                          |
| 31   | BN, D   | 2,237               | 0.1%                          |
| 32   | AN, W   | -138                | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -3,853              | -0.3%                         |
| 34             | D, C  | 122                 | 0.0%                          |
| 35             | C, C  | 470                 | 0.0%                          |
| 36             | D, BN   | 1,009               | 0.1%                          |
| 37             | BN, AN  | 1,114               | 0.1%                          |
| 38             | W, W  | 69                  | 0.0%                          |
| 39             | BN, D   | 304                 | 0.0%                          |
| 40             | D, C  | -546                | 0.0%                          |
| 41             | C, C  | -4,721              | -0.2%                         |
| 42             | C, C  | 2,098               | 0.1%                          |
| <b>Average</b> |   | <b>-424</b>         | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>2,237</b>        | <b>0.1%</b>                   |
| <b>Minimum</b> |   | <b>-9,229</b>       | <b>-0.4%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-35. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 14 (SR14) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -36,740             | -16.9%                        |
| 2    | W, W  | -127,576            | -38.1%                        |
| 3    | C, C  | -38,425             | -5.9%                         |
| 4    | C, C  | -1,623              | -0.1%                         |
| 5    | AN, W   | 4,618               | 1.2%                          |
| 6    | BN, AN  | -125,876            | -26.3%                        |
| 7    | AN, W   | -27,745             | -11.3%                        |
| 8    | D, D  | -180,406            | -38.5%                        |
| 9    | W, W  | -60,259             | -20.5%                        |
| 10   | W, W  | 4                   | 0.0%                          |
| 11   | W, AN   | -6,807              | -3.5%                         |
| 12   | D, D  | -67,393             | -13.5%                        |
| 13   | W, W  | -12,752             | -5.0%                         |
| 14   | D, D  | -74,420             | -14.7%                        |
| 15   | C, C  | -97,513             | -13.5%                        |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -52,939             | -7.0%                         |
| 17             | C, C  | -120,468            | -11.1%                        |
| 18             | C, C  | -56,097             | -4.2%                         |
| 19             | C, C  | -82,547             | -6.3%                         |
| 20             | AN, W   | -136,623            | -22.3%                        |
| 21             | C, C  | -159,242            | -19.7%                        |
| 22             | W, W  | -28,498             | -8.2%                         |
| 23             | W, W  | -43                 | 0.0%                          |
| 24             | W, W  | -43,169             | -16.5%                        |
| 25             | W, W  | -271                | -0.1%                         |
| 26             | W, AN   | -8,547              | -3.6%                         |
| 27             | AN, AN  | -189,875            | -32.2%                        |
| 28             | D, D  | -179,714            | -23.6%                        |
| 29             | D, D  | -89,659             | -11.3%                        |
| 30             | AN, BN  | -75,020             | -11.6%                        |
| 31             | BN, D   | -185,401            | -25.8%                        |
| 32             | AN, W   | -54,852             | -15.8%                        |
| 33             | W, W  | -4,620              | -2.1%                         |
| 34             | D, C  | -98,787             | -16.5%                        |
| 35             | C, C  | -67,882             | -7.8%                         |
| 36             | D, BN   | -65,034             | -5.4%                         |
| 37             | BN, AN  | -60,570             | -7.5%                         |
| 38             | W, W  | -12,328             | -4.3%                         |
| 39             | BN, D   | -64,076             | -14.6%                        |
| 40             | D, C  | -38,602             | -5.0%                         |
| 41             | C, C  | -4,464              | -0.4%                         |
| 42             | C, C  | -20,750             | -1.5%                         |
| <b>Average</b> |   | <b>-65,547</b>      | <b>-11.7%</b>                 |
| <b>Maximum</b> |   | <b>4,618</b>        | <b>1.2%</b>                   |
| <b>Minimum</b> |   | <b>-189,875</b>     | <b>-38.5%</b>                 |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-36. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 15 (SR15) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -28,108             | -2.1%                         |
| 2    | W, W  | -35,518             | -2.5%                         |
| 3    | C, C  | -3,942              | -0.2%                         |
| 4    | C, C  | -11,466             | -0.6%                         |
| 5    | AN, W   | -5,339              | -0.4%                         |
| 6    | BN, AN  | -20,836             | -1.6%                         |
| 7    | AN, W   | -5,074              | -0.4%                         |
| 8    | D, D  | -30,962             | -1.9%                         |
| 9    | W, W  | -10,803             | -0.9%                         |
| 10   | W, W  | -114                | 0.0%                          |
| 11   | W, AN   | -12,707             | -0.9%                         |
| 12   | D, D  | -19,633             | -1.2%                         |
| 13   | W, W  | -1,136              | -0.1%                         |
| 14   | D, D  | -29,663             | -1.9%                         |
| 15   | C, C  | -17,205             | -1.0%                         |
| 16   | D, C  | -15,057             | -0.8%                         |
| 17   | C, C  | -22,656             | -1.2%                         |
| 18   | C, C  | -8,960              | -0.5%                         |
| 19   | C, C  | -14,411             | -0.8%                         |
| 20   | AN, W   | -29,115             | -2.3%                         |
| 21   | C, C  | -28,429             | -1.7%                         |
| 22   | W, W  | -3,956              | -0.4%                         |
| 23   | W, W  | -27,454             | -2.1%                         |
| 24   | W, W  | -15,250             | -1.1%                         |
| 25   | W, W  | 1,130               | 0.1%                          |
| 26   | W, AN   | -26,374             | -1.9%                         |
| 27   | AN, AN  | -39,926             | -2.8%                         |
| 28   | D, D  | -37,789             | -2.4%                         |
| 29   | D, D  | -28,482             | -1.7%                         |
| 30   | AN, BN  | -39,004             | -2.5%                         |
| 31   | BN, D   | -51,741             | -3.1%                         |
| 32   | AN, W   | -60,259             | -5.0%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 1,994               | 0.2%                          |
| 34             | D, C  | -48,161             | -2.8%                         |
| 35             | C, C  | -31,066             | -1.8%                         |
| 36             | D, BN   | -20,174             | -1.1%                         |
| 37             | BN, AN  | -14,235             | -0.9%                         |
| 38             | W, W  | -15,299             | -1.3%                         |
| 39             | BN, D   | -19,680             | -1.3%                         |
| 40             | D, C  | -21,356             | -1.1%                         |
| 41             | C, C  | -4,262              | -0.2%                         |
| 42             | C, C  | -32,018             | -1.6%                         |
| <b>Average</b> |   | <b>-21,059</b>      | <b>-1.4%</b>                  |
| <b>Maximum</b> |   | <b>1,994</b>        | <b>0.2%</b>                   |
| <b>Minimum</b> |   | <b>-60,259</b>      | <b>-5.0%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-37. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 16 (SR16) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 26                  | 0.0%                          |
| 2    | W, W  | 0                   | 0.0%                          |
| 3    | C, C  | 50                  | 0.0%                          |
| 4    | C, C  | 73                  | 0.0%                          |
| 5    | AN, W   | -48                 | 0.0%                          |
| 6    | BN, AN  | 0                   | 0.0%                          |
| 7    | AN, W   | 1                   | 0.0%                          |
| 8    | D, D  | 10                  | 0.0%                          |
| 9    | W, W  | -41                 | 0.0%                          |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | -76                 | -0.1%                         |
| 12   | D, D  | 68                  | 0.1%                          |
| 13   | W, W  | 62                  | 0.1%                          |
| 14   | D, D  | 51                  | 0.0%                          |
| 15   | C, C  | 138                 | 0.1%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -40                 | 0.0%                          |
| 17             | C, C  | -76                 | 0.0%                          |
| 18             | C, C  | 114                 | 0.1%                          |
| 19             | C, C  | 58                  | 0.0%                          |
| 20             | AN, W   | -23                 | 0.0%                          |
| 21             | C, C  | -19                 | 0.0%                          |
| 22             | W, W  | 12                  | 0.0%                          |
| 23             | W, W  | 26                  | 0.0%                          |
| 24             | W, W  | -22                 | 0.0%                          |
| 25             | W, W  | 0                   | 0.0%                          |
| 26             | W, AN   | -7                  | 0.0%                          |
| 27             | AN, AN  | -10                 | 0.0%                          |
| 28             | D, D  | 23                  | 0.0%                          |
| 29             | D, D  | -64                 | 0.0%                          |
| 30             | AN, BN  | 117                 | 0.1%                          |
| 31             | BN, D   | -23                 | 0.0%                          |
| 32             | AN, W   | 0                   | 0.0%                          |
| 33             | W, W  | 39                  | 0.1%                          |
| 34             | D, C  | -165                | -0.1%                         |
| 35             | C, C  | 20                  | 0.0%                          |
| 36             | D, BN   | 58                  | 0.0%                          |
| 37             | BN, AN  | -81                 | -0.1%                         |
| 38             | W, W  | 16                  | 0.0%                          |
| 39             | BN, D   | -85                 | 0.0%                          |
| 40             | D, C  | 91                  | 0.0%                          |
| 41             | C, C  | -5                  | 0.0%                          |
| 42             | C, C  | -59                 | 0.0%                          |
| <b>Average</b> |   | <b>5</b>            | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>138</b>          | <b>0.1%</b>                   |
| <b>Minimum</b> |   | <b>-165</b>         | <b>-0.1%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-38. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 17 (SR17) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -14                 | 0.0%                          |
| 2    | W, W  | -13                 | 0.0%                          |
| 3    | C, C  | -10                 | 0.0%                          |
| 4    | C, C  | 51                  | 0.0%                          |
| 5    | AN, W   | -94                 | 0.0%                          |
| 6    | BN, AN  | 12                  | 0.0%                          |
| 7    | AN, W   | -45                 | 0.0%                          |
| 8    | D, D  | -46                 | 0.0%                          |
| 9    | W, W  | -20                 | 0.0%                          |
| 10   | W, W  | 7                   | 0.0%                          |
| 11   | W, AN   | -17                 | 0.0%                          |
| 12   | D, D  | -37                 | 0.0%                          |
| 13   | W, W  | -209                | -0.1%                         |
| 14   | D, D  | 97                  | 0.0%                          |
| 15   | C, C  | -305                | -0.1%                         |
| 16   | D, C  | 13                  | 0.0%                          |
| 17   | C, C  | 47                  | 0.0%                          |
| 18   | C, C  | -15                 | 0.0%                          |
| 19   | C, C  | 12                  | 0.0%                          |
| 20   | AN, W   | 6                   | 0.0%                          |
| 21   | C, C  | -15                 | 0.0%                          |
| 22   | W, W  | 9                   | 0.0%                          |
| 23   | W, W  | -60                 | 0.0%                          |
| 24   | W, W  | 59                  | 0.0%                          |
| 25   | W, W  | 13                  | 0.0%                          |
| 26   | W, AN   | 45                  | 0.0%                          |
| 27   | AN, AN  | -6                  | 0.0%                          |
| 28   | D, D  | -56                 | 0.0%                          |
| 29   | D, D  | -4                  | 0.0%                          |
| 30   | AN, BN  | -110                | 0.0%                          |
| 31   | BN, D   | 89                  | 0.0%                          |
| 32   | AN, W   | 23                  | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -74                 | 0.0%                          |
| 34             | D, C  | -260                | 0.0%                          |
| 35             | C, C  | 63                  | 0.0%                          |
| 36             | D, BN   | 44                  | 0.0%                          |
| 37             | BN, AN  | 115                 | 0.0%                          |
| 38             | W, W  | -1                  | 0.0%                          |
| 39             | BN, D   | 96                  | 0.0%                          |
| 40             | D, C  | -63                 | 0.0%                          |
| 41             | C, C  | -66                 | 0.0%                          |
| 42             | C, C  | 48                  | 0.0%                          |
| <b>Average</b> |   | <b>-16</b>          | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>115</b>          | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-305</b>         | <b>-0.1%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-39. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 18 (SR18) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -687                | -0.1%                         |
| 2    | W, W  | -1,432              | -0.1%                         |
| 3    | C, C  | -1,982              | -0.1%                         |
| 4    | C, C  | -23                 | 0.0%                          |
| 5    | AN, W   | -112                | 0.0%                          |
| 6    | BN, AN  | -673                | -0.1%                         |
| 7    | AN, W   | -473                | -0.1%                         |
| 8    | D, D  | -1,628              | -0.1%                         |
| 9    | W, W  | -603                | -0.1%                         |
| 10   | W, W  | -80                 | 0.0%                          |
| 11   | W, AN   | -499                | 0.0%                          |
| 12   | D, D  | -492                | 0.0%                          |
| 13   | W, W  | -334                | 0.0%                          |
| 14   | D, D  | -1,254              | -0.1%                         |
| 15   | C, C  | -1,998              | -0.1%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -1,905              | -0.1%                         |
| 17             | C, C  | -2,766              | -0.2%                         |
| 18             | C, C  | -1,962              | -0.1%                         |
| 19             | C, C  | -1,018              | -0.1%                         |
| 20             | AN, W   | -280                | 0.0%                          |
| 21             | C, C  | -2,138              | -0.1%                         |
| 22             | W, W  | -484                | -0.1%                         |
| 23             | W, W  | -642                | -0.1%                         |
| 24             | W, W  | -526                | 0.0%                          |
| 25             | W, W  | -761                | -0.1%                         |
| 26             | W, AN   | -523                | 0.0%                          |
| 27             | AN, AN  | -644                | -0.1%                         |
| 28             | D, D  | -1,545              | -0.1%                         |
| 29             | D, D  | -1,522              | -0.1%                         |
| 30             | AN, BN  | -5,393              | -0.4%                         |
| 31             | BN, D   | 990                 | 0.1%                          |
| 32             | AN, W   | -996                | -0.1%                         |
| 33             | W, W  | -708                | -0.1%                         |
| 34             | D, C  | -2,029              | -0.1%                         |
| 35             | C, C  | -1,635              | -0.1%                         |
| 36             | D, BN   | -1,286              | -0.1%                         |
| 37             | BN, AN  | -870                | -0.1%                         |
| 38             | W, W  | -1,324              | -0.2%                         |
| 39             | BN, D   | -1,776              | -0.1%                         |
| 40             | D, C  | -1,351              | -0.1%                         |
| 41             | C, C  | -1,582              | -0.1%                         |
| 42             | C, C  | -177                | 0.0%                          |
| <b>Average</b> |   | <b>-1,122</b>       | <b>-0.1%</b>                  |
| <b>Maximum</b> |   | <b>990</b>          | <b>0.1%</b>                   |
| <b>Minimum</b> |   | <b>-5,393</b>       | <b>-0.4%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-40. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 19 (SR19) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 0                   | 0.0%                          |
| 2    | W, W  | -1                  | 0.0%                          |
| 3    | C, C  | 0                   | 0.0%                          |
| 4    | C, C  | 0                   | 0.0%                          |
| 5    | AN, W   | 0                   | 0.0%                          |
| 6    | BN, AN  | -1                  | 0.0%                          |
| 7    | AN, W   | -22                 | 0.0%                          |
| 8    | D, D  | 0                   | 0.0%                          |
| 9    | W, W  | 0                   | 0.0%                          |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | 74                  | 0.0%                          |
| 12   | D, D  | 20                  | 0.0%                          |
| 13   | W, W  | -15                 | 0.0%                          |
| 14   | D, D  | 43                  | 0.0%                          |
| 15   | C, C  | 97                  | 0.0%                          |
| 16   | D, C  | -287                | -0.1%                         |
| 17   | C, C  | -36                 | 0.0%                          |
| 18   | C, C  | 37                  | 0.0%                          |
| 19   | C, C  | 0                   | 0.0%                          |
| 20   | AN, W   | 0                   | 0.0%                          |
| 21   | C, C  | 0                   | 0.0%                          |
| 22   | W, W  | 0                   | 0.0%                          |
| 23   | W, W  | -26                 | 0.0%                          |
| 24   | W, W  | 189                 | 0.1%                          |
| 25   | W, W  | 2                   | 0.0%                          |
| 26   | W, AN   | 0                   | 0.0%                          |
| 27   | AN, AN  | -27                 | 0.0%                          |
| 28   | D, D  | 26                  | 0.0%                          |
| 29   | D, D  | 10                  | 0.0%                          |
| 30   | AN, BN  | -14                 | 0.0%                          |
| 31   | BN, D   | 18                  | 0.0%                          |
| 32   | AN, W   | 0                   | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -16                 | 0.0%                          |
| 34             | D, C  | 3                   | 0.0%                          |
| 35             | C, C  | 0                   | 0.0%                          |
| 36             | D, BN   | -9                  | 0.0%                          |
| 37             | BN, AN  | 0                   | 0.0%                          |
| 38             | W, W  | -64                 | 0.0%                          |
| 39             | BN, D   | 0                   | 0.0%                          |
| 40             | D, C  | -20                 | 0.0%                          |
| 41             | C, C  | 0                   | 0.0%                          |
| 42             | C, C  | 0                   | 0.0%                          |
| <b>Average</b> |   | <b>0</b>            | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>189</b>          | <b>0.1%</b>                   |
| <b>Minimum</b> |   | <b>-287</b>         | <b>-0.1%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-41. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 20 (SR20) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 0                   | 0.0%                          |
| 2    | W, W  | 0                   | 0.0%                          |
| 3    | C, C  | -4                  | 0.0%                          |
| 4    | C, C  | 0                   | 0.0%                          |
| 5    | AN, W   | 0                   | 0.0%                          |
| 6    | BN, AN  | 4                   | 0.0%                          |
| 7    | AN, W   | 5                   | 0.0%                          |
| 8    | D, D  | -29                 | 0.0%                          |
| 9    | W, W  | 0                   | 0.0%                          |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | 1                   | 0.0%                          |
| 12   | D, D  | -38                 | 0.0%                          |
| 13   | W, W  | 0                   | 0.0%                          |
| 14   | D, D  | -4                  | 0.0%                          |
| 15   | C, C  | -25                 | 0.0%                          |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 72                  | 0.0%                          |
| 17             | C, C  | 33                  | 0.0%                          |
| 18             | C, C  | -6                  | 0.0%                          |
| 19             | C, C  | 112                 | 0.0%                          |
| 20             | AN, W   | -19                 | 0.0%                          |
| 21             | C, C  | -57                 | 0.0%                          |
| 22             | W, W  | -11                 | 0.0%                          |
| 23             | W, W  | 19                  | 0.0%                          |
| 24             | W, W  | 46                  | 0.0%                          |
| 25             | W, W  | -17                 | 0.0%                          |
| 26             | W, AN   | 0                   | 0.0%                          |
| 27             | AN, AN  | 1                   | 0.0%                          |
| 28             | D, D  | -2                  | 0.0%                          |
| 29             | D, D  | -2                  | 0.0%                          |
| 30             | AN, BN  | -5                  | 0.0%                          |
| 31             | BN, D   | -23                 | 0.0%                          |
| 32             | AN, W   | 204                 | 0.0%                          |
| 33             | W, W  | -121                | 0.0%                          |
| 34             | D, C  | 20                  | 0.0%                          |
| 35             | C, C  | 66                  | 0.0%                          |
| 36             | D, BN   | 82                  | 0.0%                          |
| 37             | BN, AN  | 26                  | 0.0%                          |
| 38             | W, W  | 6                   | 0.0%                          |
| 39             | BN, D   | -79                 | 0.0%                          |
| 40             | D, C  | 143                 | 0.0%                          |
| 41             | C, C  | -9                  | 0.0%                          |
| 42             | C, C  | 4                   | 0.0%                          |
| <b>Average</b> |   | <b>9</b>            | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>204</b>          | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-121</b>         | <b>0.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-42. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 21 (SR21) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 1                   | 0.0%                          |
| 2    | W, W  | 0                   | 0.0%                          |
| 3    | C, C  | -46                 | 0.0%                          |
| 4    | C, C  | 35                  | 0.0%                          |
| 5    | AN, W   | -21                 | 0.0%                          |
| 6    | BN, AN  | -38                 | 0.0%                          |
| 7    | AN, W   | -37                 | 0.0%                          |
| 8    | D, D  | 36                  | 0.0%                          |
| 9    | W, W  | 29                  | 0.0%                          |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | -32                 | 0.0%                          |
| 12   | D, D  | -63                 | 0.0%                          |
| 13   | W, W  | -104                | 0.0%                          |
| 14   | D, D  | 41                  | 0.0%                          |
| 15   | C, C  | 110                 | 0.0%                          |
| 16   | D, C  | -1                  | 0.0%                          |
| 17   | C, C  | -17                 | 0.0%                          |
| 18   | C, C  | 3                   | 0.0%                          |
| 19   | C, C  | -106                | 0.0%                          |
| 20   | AN, W   | -8                  | 0.0%                          |
| 21   | C, C  | -20                 | 0.0%                          |
| 22   | W, W  | -125                | 0.0%                          |
| 23   | W, W  | 14                  | 0.0%                          |
| 24   | W, W  | 52                  | 0.0%                          |
| 25   | W, W  | -94                 | 0.0%                          |
| 26   | W, AN   | -92                 | 0.0%                          |
| 27   | AN, AN  | 70                  | 0.0%                          |
| 28   | D, D  | -18                 | 0.0%                          |
| 29   | D, D  | 11                  | 0.0%                          |
| 30   | AN, BN  | 17                  | 0.0%                          |
| 31   | BN, D   | -124                | 0.0%                          |
| 32   | AN, W   | 68                  | 0.0%                          |
| 33   | W, W  | -1                  | 0.0%                          |
| 34   | D, C  | -129                | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 35             | C, C  | 91                  | 0.0%                          |
| 36             | D, BN   | 31                  | 0.0%                          |
| 37             | BN, AN  | 92                  | 0.0%                          |
| 38             | W, W  | 129                 | 0.0%                          |
| 39             | BN, D   | -102                | 0.0%                          |
| 40             | D, C  | -13                 | 0.0%                          |
| 41             | C, C  | 17                  | 0.0%                          |
| 42             | C, C  | 2                   | 0.0%                          |
| <b>Average</b> |   | <b>-8</b>           | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>129</b>          | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-129</b>         | <b>0.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

### I-1.1.3 Changes in Groundwater Pumping, Alternative 2 with TUCP Without VA Compared to No Action Alternative

Table I.1-43 through Table I.1-63 provide the annual simulated groundwater pumping through the model simulation period for each of the 21 model subregions for Alternative 2 with TUCP without VA compared to the No Action Alternative.

Table I.1-43. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 1 (SR1) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | -33                        | -0.1%                                |
| 2    | W, W  | -130                       | -0.2%                                |
| 3    | C, C  | 1,025                      | 1.7%                                 |
| 4    | C, C  | 6,417                      | 8.4%                                 |
| 5    | AN, W   | 142                        | 0.2%                                 |
| 6    | BN, AN  | 74                         | 0.1%                                 |
| 7    | AN, W   | -66                        | -0.1%                                |
| 8    | D, D  | -167                       | -0.3%                                |
| 9    | W, W  | -51                        | -0.1%                                |
| 10   | W, W  | 107                        | 0.2%                                 |
| 11   | W, AN   | 2                          | 0.0%                                 |
| 12   | D, D  | 569                        | 0.9%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 13             | W, W  | -21                        | 0.0%                                 |
| 14             | D, D  | 1,800                      | 2.5%                                 |
| 15             | C, C  | 3,748                      | 5.0%                                 |
| 16             | D, C  | 484                        | 0.7%                                 |
| 17             | C, C  | -3,158                     | -4.4%                                |
| 18             | C, C  | 4,272                      | 5.2%                                 |
| 19             | C, C  | 2,272                      | 2.6%                                 |
| 20             | AN, W   | 326                        | 0.5%                                 |
| 21             | C, C  | 4,207                      | 5.9%                                 |
| 22             | W, W  | 1,353                      | 2.1%                                 |
| 23             | W, W  | 26                         | 0.0%                                 |
| 24             | W, W  | -33                        | -0.1%                                |
| 25             | W, W  | -61                        | -0.1%                                |
| 26             | W, AN   | -154                       | -0.3%                                |
| 27             | AN, AN  | 38                         | 0.1%                                 |
| 28             | D, D  | 1,271                      | 2.0%                                 |
| 29             | D, D  | 480                        | 0.7%                                 |
| 30             | AN, BN  | 117                        | 0.2%                                 |
| 31             | BN, D   | -17                        | 0.0%                                 |
| 32             | AN, W   | -8                         | 0.0%                                 |
| 33             | W, W  | -140                       | -0.2%                                |
| 34             | D, C  | 96                         | 0.1%                                 |
| 35             | C, C  | 3,366                      | 4.8%                                 |
| 36             | D, BN   | 684                        | 1.0%                                 |
| 37             | BN, AN  | -55                        | -0.1%                                |
| 38             | W, W  | -34                        | -0.1%                                |
| 39             | BN, D   | -37                        | -0.1%                                |
| 40             | D, C  | 3,571                      | 5.1%                                 |
| 41             | C, C  | 6,881                      | 8.0%                                 |
| 42             | C, C  | -1,293                     | -1.4%                                |
| <b>Average</b> |   | <b>902</b>                 | <b>1.2%</b>                          |
| <b>Maximum</b> |   | <b>6,881</b>               | <b>8.4%</b>                          |
| <b>Minimum</b> |   | <b>-3,158</b>              | <b>-4.4%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-44. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 2 (SR2) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 8                          | 0.0%                                 |
| 2    | W, W  | 102                        | 0.0%                                 |
| 3    | C, C  | 3,124                      | 0.6%                                 |
| 4    | C, C  | 4,718                      | 0.7%                                 |
| 5    | AN, W   | 571                        | 0.1%                                 |
| 6    | BN, AN  | 810                        | 0.2%                                 |
| 7    | AN, W   | 140                        | 0.0%                                 |
| 8    | D, D  | -889                       | -0.2%                                |
| 9    | W, W  | -98                        | 0.0%                                 |
| 10   | W, W  | 0                          | 0.0%                                 |
| 11   | W, AN   | 2                          | 0.0%                                 |
| 12   | D, D  | 2,941                      | 0.5%                                 |
| 13   | W, W  | 980                        | 0.2%                                 |
| 14   | D, D  | 4,079                      | 0.7%                                 |
| 15   | C, C  | 10,693                     | 1.7%                                 |
| 16   | D, C  | 1,670                      | 0.3%                                 |
| 17   | C, C  | 2,950                      | 0.6%                                 |
| 18   | C, C  | 5,768                      | 1.0%                                 |
| 19   | C, C  | 925                        | 0.1%                                 |
| 20   | AN, W   | -51                        | 0.0%                                 |
| 21   | C, C  | 11,532                     | 2.1%                                 |
| 22   | W, W  | 3,287                      | 0.7%                                 |
| 23   | W, W  | 18                         | 0.0%                                 |
| 24   | W, W  | 9                          | 0.0%                                 |
| 25   | W, W  | -8                         | 0.0%                                 |
| 26   | W, AN   | 37                         | 0.0%                                 |
| 27   | AN, AN  | 26                         | 0.0%                                 |
| 28   | D, D  | 3,133                      | 0.6%                                 |
| 29   | D, D  | 428                        | 0.1%                                 |
| 30   | AN, BN  | -20                        | 0.0%                                 |
| 31   | BN, D   | -774                       | -0.1%                                |
| 32   | AN, W   | -4                         | 0.0%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | 3                          | 0.0%                                 |
| 34             | D, C  | 223                        | 0.0%                                 |
| 35             | C, C  | 7,496                      | 1.3%                                 |
| 36             | D, BN   | 1,516                      | 0.3%                                 |
| 37             | BN, AN  | -63                        | 0.0%                                 |
| 38             | W, W  | 5                          | 0.0%                                 |
| 39             | BN, D   | -1                         | 0.0%                                 |
| 40             | D, C  | 7,446                      | 1.2%                                 |
| 41             | C, C  | 5,942                      | 0.9%                                 |
| 42             | C, C  | -323                       | -0.1%                                |
| <b>Average</b> |   | <b>1,866</b>               | <b>0.3%</b>                          |
| <b>Maximum</b> |   | <b>11,532</b>              | <b>2.1%</b>                          |
| <b>Minimum</b> |   | <b>-889</b>                | <b>-0.2%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-45. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 3 (SR3) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 0                          | 0.0%                                 |
| 2    | W, W  | 1,243                      | 0.4%                                 |
| 3    | C, C  | 17,199                     | 3.8%                                 |
| 4    | C, C  | 74,639                     | 13.0%                                |
| 5    | AN, W   | 3,974                      | 1.1%                                 |
| 6    | BN, AN  | 4,704                      | 1.2%                                 |
| 7    | AN, W   | 759                        | 0.2%                                 |
| 8    | D, D  | -4,783                     | -1.3%                                |
| 9    | W, W  | -478                       | -0.2%                                |
| 10   | W, W  | 94                         | 0.0%                                 |
| 11   | W, AN   | 306                        | 0.1%                                 |
| 12   | D, D  | 15,805                     | 4.0%                                 |
| 13   | W, W  | 9,818                      | 2.9%                                 |
| 14   | D, D  | 22,572                     | 5.4%                                 |
| 15   | C, C  | 55,207                     | 12.4%                                |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 16             | D, C  | 5,752                      | 1.4%                                 |
| 17             | C, C  | 25,180                     | 5.3%                                 |
| 18             | C, C  | 90,211                     | 16.9%                                |
| 19             | C, C  | 7,104                      | 1.2%                                 |
| 20             | AN, W   | -286                       | -0.1%                                |
| 21             | C, C  | 65,456                     | 16.3%                                |
| 22             | W, W  | 14,148                     | 4.4%                                 |
| 23             | W, W  | 145                        | 0.0%                                 |
| 24             | W, W  | 163                        | 0.1%                                 |
| 25             | W, W  | 52                         | 0.0%                                 |
| 26             | W, AN   | 643                        | 0.2%                                 |
| 27             | AN, AN  | 407                        | 0.1%                                 |
| 28             | D, D  | 16,663                     | 4.5%                                 |
| 29             | D, D  | -3,742                     | -1.0%                                |
| 30             | AN, BN  | -49                        | 0.0%                                 |
| 31             | BN, D   | -10,210                    | -3.0%                                |
| 32             | AN, W   | -304                       | -0.1%                                |
| 33             | W, W  | 82                         | 0.0%                                 |
| 34             | D, C  | 3,183                      | 0.9%                                 |
| 35             | C, C  | 40,664                     | 9.9%                                 |
| 36             | D, BN   | 7,552                      | 1.7%                                 |
| 37             | BN, AN  | 41                         | 0.0%                                 |
| 38             | W, W  | 12                         | 0.0%                                 |
| 39             | BN, D   | -10                        | 0.0%                                 |
| 40             | D, C  | 38,479                     | 9.4%                                 |
| 41             | C, C  | 86,744                     | 14.9%                                |
| 42             | C, C  | 1,478                      | 0.2%                                 |
| <b>Average</b> |   | <b>14,062</b>              | <b>3.0%</b>                          |
| <b>Maximum</b> |   | <b>90,211</b>              | <b>16.9%</b>                         |
| <b>Minimum</b> |   | <b>-10,210</b>             | <b>-3.0%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-46. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 4 (SR4) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 0                          | 0.0%                                 |
| 2    | W, W  | 24                         | 0.0%                                 |
| 3    | C, C  | 82                         | 0.0%                                 |
| 4    | C, C  | 34,145                     | 9.1%                                 |
| 5    | AN, W   | 1,092                      | 0.3%                                 |
| 6    | BN, AN  | 1,026                      | 0.3%                                 |
| 7    | AN, W   | -7,103                     | -2.2%                                |
| 8    | D, D  | -466                       | -0.1%                                |
| 9    | W, W  | 10,925                     | 3.6%                                 |
| 10   | W, W  | 0                          | 0.0%                                 |
| 11   | W, AN   | 10                         | 0.0%                                 |
| 12   | D, D  | 28                         | 0.0%                                 |
| 13   | W, W  | 20                         | 0.0%                                 |
| 14   | D, D  | 44                         | 0.0%                                 |
| 15   | C, C  | 1,080                      | 0.3%                                 |
| 16   | D, C  | -803                       | -0.2%                                |
| 17   | C, C  | -14,013                    | -4.4%                                |
| 18   | C, C  | 31,417                     | 9.5%                                 |
| 19   | C, C  | 2,026                      | 0.6%                                 |
| 20   | AN, W   | 1,179                      | 0.4%                                 |
| 21   | C, C  | 887                        | 0.3%                                 |
| 22   | W, W  | 8                          | 0.0%                                 |
| 23   | W, W  | 3                          | 0.0%                                 |
| 24   | W, W  | 0                          | 0.0%                                 |
| 25   | W, W  | 0                          | 0.0%                                 |
| 26   | W, AN   | 1                          | 0.0%                                 |
| 27   | AN, AN  | 2,513                      | 0.8%                                 |
| 28   | D, D  | 45                         | 0.0%                                 |
| 29   | D, D  | 8                          | 0.0%                                 |
| 30   | AN, BN  | -48                        | 0.0%                                 |
| 31   | BN, D   | -497                       | -0.1%                                |
| 32   | AN, W   | 7                          | 0.0%                                 |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | 0                          | 0.0%                                 |
| 34             | D, C  | 6                          | 0.0%                                 |
| 35             | C, C  | 39                         | 0.0%                                 |
| 36             | D, BN   | -1,049                     | -0.3%                                |
| 37             | BN, AN  | 15                         | 0.0%                                 |
| 38             | W, W  | 40                         | 0.0%                                 |
| 39             | BN, D   | 27                         | 0.0%                                 |
| 40             | D, C  | 61                         | 0.0%                                 |
| 41             | C, C  | 37,847                     | 9.9%                                 |
| 42             | C, C  | 1,247                      | 0.3%                                 |
| <b>Average</b> |   | <b>2,426</b>               | <b>0.7%</b>                          |
| <b>Maximum</b> |   | <b>37,847</b>              | <b>9.9%</b>                          |
| <b>Minimum</b> |   | <b>-14,013</b>             | <b>-4.4%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-47. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 5 (SR5) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | -44                        | 0.0%                                 |
| 2    | W, W  | 164                        | 0.0%                                 |
| 3    | C, C  | 1,233                      | 0.3%                                 |
| 4    | C, C  | 155                        | 0.0%                                 |
| 5    | AN, W   | -1,344                     | -0.3%                                |
| 6    | BN, AN  | 447                        | 0.1%                                 |
| 7    | AN, W   | 52                         | 0.0%                                 |
| 8    | D, D  | -293                       | -0.1%                                |
| 9    | W, W  | 174                        | 0.0%                                 |
| 10   | W, W  | 106                        | 0.0%                                 |
| 11   | W, AN   | 6                          | 0.0%                                 |
| 12   | D, D  | 695                        | 0.2%                                 |
| 13   | W, W  | 147                        | 0.0%                                 |
| 14   | D, D  | 1,787                      | 0.4%                                 |
| 15   | C, C  | 4,198                      | 0.9%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 16             | D, C  | -3,198                     | -0.7%                                |
| 17             | C, C  | 679                        | 0.2%                                 |
| 18             | C, C  | -144                       | 0.0%                                 |
| 19             | C, C  | -358                       | -0.1%                                |
| 20             | AN, W   | 2,248                      | 0.6%                                 |
| 21             | C, C  | 4,855                      | 1.0%                                 |
| 22             | W, W  | 1,128                      | 0.3%                                 |
| 23             | W, W  | 108                        | 0.0%                                 |
| 24             | W, W  | -240                       | -0.1%                                |
| 25             | W, W  | 42                         | 0.0%                                 |
| 26             | W, AN   | 31                         | 0.0%                                 |
| 27             | AN, AN  | 233                        | 0.1%                                 |
| 28             | D, D  | 1,261                      | 0.3%                                 |
| 29             | D, D  | 357                        | 0.1%                                 |
| 30             | AN, BN  | -363                       | -0.1%                                |
| 31             | BN, D   | 101                        | 0.0%                                 |
| 32             | AN, W   | 101                        | 0.0%                                 |
| 33             | W, W  | -171                       | 0.0%                                 |
| 34             | D, C  | 88                         | 0.0%                                 |
| 35             | C, C  | 3,259                      | 0.7%                                 |
| 36             | D, BN   | 459                        | 0.1%                                 |
| 37             | BN, AN  | -18                        | 0.0%                                 |
| 38             | W, W  | -132                       | 0.0%                                 |
| 39             | BN, D   | -50                        | 0.0%                                 |
| 40             | D, C  | 2,964                      | 0.6%                                 |
| 41             | C, C  | 724                        | 0.1%                                 |
| 42             | C, C  | -358                       | -0.1%                                |
| <b>Average</b> |   | <b>502</b>                 | <b>0.1%</b>                          |
| <b>Maximum</b> |   | <b>4,855</b>               | <b>1.0%</b>                          |
| <b>Minimum</b> |   | <b>-3,198</b>              | <b>-0.7%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-48. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 6 (SR6) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | -804                       | -0.1%                                |
| 2    | W, W  | 1,283                      | 0.2%                                 |
| 3    | C, C  | 144                        | 0.0%                                 |
| 4    | C, C  | -1,007                     | -0.1%                                |
| 5    | AN, W   | 98                         | 0.0%                                 |
| 6    | BN, AN  | 383                        | 0.1%                                 |
| 7    | AN, W   | -207                       | 0.0%                                 |
| 8    | D, D  | 656                        | 0.1%                                 |
| 9    | W, W  | 815                        | 0.1%                                 |
| 10   | W, W  | -275                       | 0.0%                                 |
| 11   | W, AN   | 0                          | 0.0%                                 |
| 12   | D, D  | 558                        | 0.1%                                 |
| 13   | W, W  | 439                        | 0.1%                                 |
| 14   | D, D  | -677                       | -0.1%                                |
| 15   | C, C  | 2,592                      | 0.4%                                 |
| 16   | D, C  | 43                         | 0.0%                                 |
| 17   | C, C  | -6,043                     | -0.8%                                |
| 18   | C, C  | -2,602                     | -0.3%                                |
| 19   | C, C  | 1,101                      | 0.1%                                 |
| 20   | AN, W   | 236                        | 0.0%                                 |
| 21   | C, C  | 2,002                      | 0.2%                                 |
| 22   | W, W  | 97                         | 0.0%                                 |
| 23   | W, W  | -666                       | -0.1%                                |
| 24   | W, W  | -815                       | -0.1%                                |
| 25   | W, W  | -362                       | -0.1%                                |
| 26   | W, AN   | 142                        | 0.0%                                 |
| 27   | AN, AN  | -485                       | -0.1%                                |
| 28   | D, D  | 481                        | 0.1%                                 |
| 29   | D, D  | 79                         | 0.0%                                 |
| 30   | AN, BN  | 1,734                      | 0.3%                                 |
| 31   | BN, D   | 990                        | 0.1%                                 |
| 32   | AN, W   | 257                        | 0.0%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | 383                        | 0.1%                                 |
| 34             | D, C  | -717                       | -0.1%                                |
| 35             | C, C  | 2,087                      | 0.3%                                 |
| 36             | D, BN   | 693                        | 0.1%                                 |
| 37             | BN, AN  | -300                       | 0.0%                                 |
| 38             | W, W  | 426                        | 0.1%                                 |
| 39             | BN, D   | -658                       | -0.1%                                |
| 40             | D, C  | 1,008                      | 0.1%                                 |
| 41             | C, C  | -833                       | -0.1%                                |
| 42             | C, C  | 1,185                      | 0.1%                                 |
| <b>Average</b> |   | <b>82</b>                  | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>2,592</b>               | <b>0.4%</b>                          |
| <b>Minimum</b> |   | <b>-6,043</b>              | <b>-0.8%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-49. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 7 (SR7) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 873                        | 0.3%                                 |
| 2    | W, W  | 694                        | 0.2%                                 |
| 3    | C, C  | -416                       | -0.1%                                |
| 4    | C, C  | -12,627                    | -3.0%                                |
| 5    | AN, W   | -1,740                     | -0.5%                                |
| 6    | BN, AN  | 997                        | 0.3%                                 |
| 7    | AN, W   | 107                        | 0.0%                                 |
| 8    | D, D  | -648                       | -0.2%                                |
| 9    | W, W  | -996                       | -0.3%                                |
| 10   | W, W  | -363                       | -0.1%                                |
| 11   | W, AN   | 12                         | 0.0%                                 |
| 12   | D, D  | 329                        | 0.1%                                 |
| 13   | W, W  | 690                        | 0.2%                                 |
| 14   | D, D  | 142                        | 0.0%                                 |
| 15   | C, C  | -74                        | 0.0%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 16             | D, C  | 8                          | 0.0%                                 |
| 17             | C, C  | -7,308                     | -2.0%                                |
| 18             | C, C  | -10,137                    | -2.6%                                |
| 19             | C, C  | -2,726                     | -0.7%                                |
| 20             | AN, W   | -378                       | -0.1%                                |
| 21             | C, C  | -198                       | -0.1%                                |
| 22             | W, W  | -1,286                     | -0.3%                                |
| 23             | W, W  | 357                        | 0.1%                                 |
| 24             | W, W  | -1,047                     | -0.3%                                |
| 25             | W, W  | 2,199                      | 0.6%                                 |
| 26             | W, AN   | 663                        | 0.2%                                 |
| 27             | AN, AN  | -21                        | 0.0%                                 |
| 28             | D, D  | -952                       | -0.2%                                |
| 29             | D, D  | -37                        | 0.0%                                 |
| 30             | AN, BN  | -502                       | -0.1%                                |
| 31             | BN, D   | 411                        | 0.1%                                 |
| 32             | AN, W   | -2,447                     | -0.7%                                |
| 33             | W, W  | -197                       | -0.1%                                |
| 34             | D, C  | -794                       | -0.2%                                |
| 35             | C, C  | 270                        | 0.1%                                 |
| 36             | D, BN   | -427                       | -0.1%                                |
| 37             | BN, AN  | 820                        | 0.2%                                 |
| 38             | W, W  | 471                        | 0.1%                                 |
| 39             | BN, D   | 127                        | 0.0%                                 |
| 40             | D, C  | -109                       | 0.0%                                 |
| 41             | C, C  | -13,036                    | -3.2%                                |
| 42             | C, C  | -1,524                     | -0.4%                                |
| <b>Average</b> |   | <b>-1,210</b>              | <b>-0.3%</b>                         |
| <b>Maximum</b> |   | <b>2,199</b>               | <b>0.6%</b>                          |
| <b>Minimum</b> |   | <b>-13,036</b>             | <b>-3.2%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-50. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 8 (SR8) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | -206                       | 0.0%                                 |
| 2    | W, W  | -393                       | 0.0%                                 |
| 3    | C, C  | -196                       | 0.0%                                 |
| 4    | C, C  | -30                        | 0.0%                                 |
| 5    | AN, W   | -188                       | 0.0%                                 |
| 6    | BN, AN  | 90                         | 0.0%                                 |
| 7    | AN, W   | 289                        | 0.0%                                 |
| 8    | D, D  | -45                        | 0.0%                                 |
| 9    | W, W  | 137                        | 0.0%                                 |
| 10   | W, W  | 55                         | 0.0%                                 |
| 11   | W, AN   | -26                        | 0.0%                                 |
| 12   | D, D  | -58                        | 0.0%                                 |
| 13   | W, W  | 114                        | 0.0%                                 |
| 14   | D, D  | -322                       | 0.0%                                 |
| 15   | C, C  | 330                        | 0.0%                                 |
| 16   | D, C  | -106                       | 0.0%                                 |
| 17   | C, C  | -12                        | 0.0%                                 |
| 18   | C, C  | -56                        | 0.0%                                 |
| 19   | C, C  | 66                         | 0.0%                                 |
| 20   | AN, W   | 70                         | 0.0%                                 |
| 21   | C, C  | -888                       | -0.1%                                |
| 22   | W, W  | 112                        | 0.0%                                 |
| 23   | W, W  | -16                        | 0.0%                                 |
| 24   | W, W  | -1,047                     | -0.1%                                |
| 25   | W, W  | 34                         | 0.0%                                 |
| 26   | W, AN   | 62                         | 0.0%                                 |
| 27   | AN, AN  | 13                         | 0.0%                                 |
| 28   | D, D  | 140                        | 0.0%                                 |
| 29   | D, D  | -100                       | 0.0%                                 |
| 30   | AN, BN  | 134                        | 0.0%                                 |
| 31   | BN, D   | 102                        | 0.0%                                 |
| 32   | AN, W   | -826                       | -0.1%                                |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | -659                       | -0.1%                                |
| 34             | D, C  | 172                        | 0.0%                                 |
| 35             | C, C  | 135                        | 0.0%                                 |
| 36             | D, BN   | 3                          | 0.0%                                 |
| 37             | BN, AN  | 165                        | 0.0%                                 |
| 38             | W, W  | 106                        | 0.0%                                 |
| 39             | BN, D   | 445                        | 0.0%                                 |
| 40             | D, C  | 103                        | 0.0%                                 |
| 41             | C, C  | 53                         | 0.0%                                 |
| 42             | C, C  | 240                        | 0.0%                                 |
| <b>Average</b> |   | <b>-48</b>                 | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>445</b>                 | <b>0.0%</b>                          |
| <b>Minimum</b> |   | <b>-1,047</b>              | <b>-0.1%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-51. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 9 (SR9) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 342                        | 0.1%                                 |
| 2    | W, W  | -824                       | -0.2%                                |
| 3    | C, C  | 780                        | 0.1%                                 |
| 4    | C, C  | 659                        | 0.1%                                 |
| 5    | AN, W   | -53                        | 0.0%                                 |
| 6    | BN, AN  | -299                       | -0.1%                                |
| 7    | AN, W   | -391                       | -0.1%                                |
| 8    | D, D  | 42                         | 0.0%                                 |
| 9    | W, W  | 225                        | 0.0%                                 |
| 10   | W, W  | -107                       | 0.0%                                 |
| 11   | W, AN   | -859                       | -0.2%                                |
| 12   | D, D  | 458                        | 0.1%                                 |
| 13   | W, W  | 226                        | 0.0%                                 |
| 14   | D, D  | 634                        | 0.1%                                 |
| 15   | C, C  | 2,320                      | 0.4%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 16             | D, C  | 1,661                      | 0.3%                                 |
| 17             | C, C  | 96                         | 0.0%                                 |
| 18             | C, C  | -112                       | 0.0%                                 |
| 19             | C, C  | -553                       | -0.1%                                |
| 20             | AN, W   | -3,648                     | -0.7%                                |
| 21             | C, C  | 1,858                      | 0.3%                                 |
| 22             | W, W  | 894                        | 0.2%                                 |
| 23             | W, W  | -53                        | 0.0%                                 |
| 24             | W, W  | -2,862                     | -0.6%                                |
| 25             | W, W  | -66                        | 0.0%                                 |
| 26             | W, AN   | -269                       | -0.1%                                |
| 27             | AN, AN  | -629                       | -0.1%                                |
| 28             | D, D  | 648                        | 0.1%                                 |
| 29             | D, D  | 562                        | 0.1%                                 |
| 30             | AN, BN  | -106                       | 0.0%                                 |
| 31             | BN, D   | -866                       | -0.2%                                |
| 32             | AN, W   | -356                       | -0.1%                                |
| 33             | W, W  | -336                       | -0.1%                                |
| 34             | D, C  | -35                        | 0.0%                                 |
| 35             | C, C  | 982                        | 0.2%                                 |
| 36             | D, BN   | 218                        | 0.0%                                 |
| 37             | BN, AN  | 535                        | 0.1%                                 |
| 38             | W, W  | -39                        | 0.0%                                 |
| 39             | BN, D   | -928                       | -0.2%                                |
| 40             | D, C  | 2,600                      | 0.4%                                 |
| 41             | C, C  | 251                        | 0.0%                                 |
| 42             | C, C  | -98                        | 0.0%                                 |
| <b>Average</b> |   | <b>60</b>                  | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>2,600</b>               | <b>0.4%</b>                          |
| <b>Minimum</b> |   | <b>-3,648</b>              | <b>-0.7%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-52. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 10 (SR10) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 12,712                     | 4.4%                                 |
| 2    | W, W  | -13,514                    | -3.6%                                |
| 3    | C, C  | 9,994                      | 1.9%                                 |
| 4    | C, C  | -22,719                    | -2.8%                                |
| 5    | AN, W   | -2,010                     | -0.5%                                |
| 6    | BN, AN  | -5,198                     | -1.3%                                |
| 7    | AN, W   | -2,601                     | -0.9%                                |
| 8    | D, D  | 4,428                      | 1.0%                                 |
| 9    | W, W  | 844                        | 0.3%                                 |
| 10   | W, W  | 258                        | 0.1%                                 |
| 11   | W, AN   | -7,708                     | -2.5%                                |
| 12   | D, D  | 3,811                      | 0.9%                                 |
| 13   | W, W  | 3,978                      | 1.3%                                 |
| 14   | D, D  | 9,835                      | 2.2%                                 |
| 15   | C, C  | 29,344                     | 5.6%                                 |
| 16   | D, C  | 7,275                      | 1.3%                                 |
| 17   | C, C  | 1,322                      | 0.2%                                 |
| 18   | C, C  | -12,565                    | -1.6%                                |
| 19   | C, C  | 725                        | 0.1%                                 |
| 20   | AN, W   | -40,300                    | -9.6%                                |
| 21   | C, C  | 23,599                     | 4.3%                                 |
| 22   | W, W  | 8,932                      | 2.6%                                 |
| 23   | W, W  | 1,637                      | 0.5%                                 |
| 24   | W, W  | -7,957                     | -2.6%                                |
| 25   | W, W  | 50                         | 0.0%                                 |
| 26   | W, AN   | -2,955                     | -1.0%                                |
| 27   | AN, AN  | -7,190                     | -1.8%                                |
| 28   | D, D  | 5,530                      | 1.2%                                 |
| 29   | D, D  | 10,306                     | 2.2%                                 |
| 30   | AN, BN  | 47                         | 0.0%                                 |
| 31   | BN, D   | -3,549                     | -0.8%                                |
| 32   | AN, W   | -5,331                     | -1.8%                                |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | -3,597                     | -1.2%                                |
| 34             | D, C  | -5,043                     | -1.2%                                |
| 35             | C, C  | 12,780                     | 2.6%                                 |
| 36             | D, BN   | 1,574                      | 0.3%                                 |
| 37             | BN, AN  | 6,999                      | 1.6%                                 |
| 38             | W, W  | 1,540                      | 0.5%                                 |
| 39             | BN, D   | -22,563                    | -5.9%                                |
| 40             | D, C  | 23,288                     | 5.2%                                 |
| 41             | C, C  | -39,203                    | -5.1%                                |
| 42             | C, C  | -1,515                     | -0.2%                                |
| <b>Average</b> |   | <b>-588</b>                | <b>-0.1%</b>                         |
| <b>Maximum</b> |   | <b>29,344</b>              | <b>5.6%</b>                          |
| <b>Minimum</b> |   | <b>-40,300</b>             | <b>-9.6%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-53. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 11 (SR11) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | -24                        | 0.0%                                 |
| 2    | W, W  | -2                         | 0.0%                                 |
| 3    | C, C  | -3,196                     | -0.8%                                |
| 4    | C, C  | -210                       | 0.0%                                 |
| 5    | AN, W   | 14                         | 0.0%                                 |
| 6    | BN, AN  | 4                          | 0.0%                                 |
| 7    | AN, W   | 5                          | 0.0%                                 |
| 8    | D, D  | -3,297                     | -0.9%                                |
| 9    | W, W  | -72                        | 0.0%                                 |
| 10   | W, W  | 18                         | 0.0%                                 |
| 11   | W, AN   | 29                         | 0.0%                                 |
| 12   | D, D  | -15                        | 0.0%                                 |
| 13   | W, W  | 40                         | 0.0%                                 |
| 14   | D, D  | -21                        | 0.0%                                 |
| 15   | C, C  | -13                        | 0.0%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 16             | D, C  | 58                         | 0.0%                                 |
| 17             | C, C  | -73                        | 0.0%                                 |
| 18             | C, C  | 206                        | 0.1%                                 |
| 19             | C, C  | -248                       | -0.1%                                |
| 20             | AN, W   | -3,456                     | -1.0%                                |
| 21             | C, C  | 524                        | 0.1%                                 |
| 22             | W, W  | 413                        | 0.1%                                 |
| 23             | W, W  | 142                        | 0.0%                                 |
| 24             | W, W  | 9,881                      | 3.1%                                 |
| 25             | W, W  | 7,610                      | 3.1%                                 |
| 26             | W, AN   | 5                          | 0.0%                                 |
| 27             | AN, AN  | 0                          | 0.0%                                 |
| 28             | D, D  | 142                        | 0.0%                                 |
| 29             | D, D  | 93                         | 0.0%                                 |
| 30             | AN, BN  | 52                         | 0.0%                                 |
| 31             | BN, D   | 5                          | 0.0%                                 |
| 32             | AN, W   | 12,360                     | 4.6%                                 |
| 33             | W, W  | 236                        | 0.1%                                 |
| 34             | D, C  | -6                         | 0.0%                                 |
| 35             | C, C  | -21                        | 0.0%                                 |
| 36             | D, BN   | 41                         | 0.0%                                 |
| 37             | BN, AN  | -43                        | 0.0%                                 |
| 38             | W, W  | 20                         | 0.0%                                 |
| 39             | BN, D   | -243                       | -0.1%                                |
| 40             | D, C  | 184                        | 0.0%                                 |
| 41             | C, C  | 496                        | 0.1%                                 |
| 42             | C, C  | -254                       | -0.1%                                |
| <b>Average</b> |   | <b>509</b>                 | <b>0.2%</b>                          |
| <b>Maximum</b> |   | <b>12,360</b>              | <b>4.6%</b>                          |
| <b>Minimum</b> |   | <b>-3,456</b>              | <b>-1.0%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-54. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 12 (SR12) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 44                         | 0.0%                                 |
| 2    | W, W  | -75                        | 0.0%                                 |
| 3    | C, C  | -12                        | 0.0%                                 |
| 4    | C, C  | 272                        | 0.0%                                 |
| 5    | AN, W   | 78                         | 0.0%                                 |
| 6    | BN, AN  | -4                         | 0.0%                                 |
| 7    | AN, W   | -74                        | 0.0%                                 |
| 8    | D, D  | -6                         | 0.0%                                 |
| 9    | W, W  | -109                       | 0.0%                                 |
| 10   | W, W  | -142                       | 0.0%                                 |
| 11   | W, AN   | -26                        | 0.0%                                 |
| 12   | D, D  | -244                       | 0.0%                                 |
| 13   | W, W  | 87                         | 0.0%                                 |
| 14   | D, D  | -68                        | 0.0%                                 |
| 15   | C, C  | -158                       | 0.0%                                 |
| 16   | D, C  | 256                        | 0.0%                                 |
| 17   | C, C  | -272                       | 0.0%                                 |
| 18   | C, C  | -156                       | 0.0%                                 |
| 19   | C, C  | -272                       | 0.0%                                 |
| 20   | AN, W   | -10,268                    | -1.7%                                |
| 21   | C, C  | 2,568                      | 0.4%                                 |
| 22   | W, W  | 1,154                      | 0.3%                                 |
| 23   | W, W  | -3                         | 0.0%                                 |
| 24   | W, W  | -11                        | 0.0%                                 |
| 25   | W, W  | 39                         | 0.0%                                 |
| 26   | W, AN   | -28                        | 0.0%                                 |
| 27   | AN, AN  | -66                        | 0.0%                                 |
| 28   | D, D  | -1                         | 0.0%                                 |
| 29   | D, D  | -38                        | 0.0%                                 |
| 30   | AN, BN  | 83                         | 0.0%                                 |
| 31   | BN, D   | -99                        | 0.0%                                 |
| 32   | AN, W   | -25                        | 0.0%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | 20                         | 0.0%                                 |
| 34             | D, C  | -55                        | 0.0%                                 |
| 35             | C, C  | 107                        | 0.0%                                 |
| 36             | D, BN   | -256                       | 0.0%                                 |
| 37             | BN, AN  | 38                         | 0.0%                                 |
| 38             | W, W  | 29                         | 0.0%                                 |
| 39             | BN, D   | 42                         | 0.0%                                 |
| 40             | D, C  | -112                       | 0.0%                                 |
| 41             | C, C  | -488                       | -0.1%                                |
| 42             | C, C  | 160                        | 0.0%                                 |
| <b>Average</b> |   | <b>-193</b>                | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>2,568</b>               | <b>0.4%</b>                          |
| <b>Minimum</b> |   | <b>-10,268</b>             | <b>-1.7%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-55. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 13 (SR13) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 358                        | 0.0%                                 |
| 2    | W, W  | -193                       | 0.0%                                 |
| 3    | C, C  | -78                        | 0.0%                                 |
| 4    | C, C  | -2,240                     | -0.1%                                |
| 5    | AN, W   | 213                        | 0.0%                                 |
| 6    | BN, AN  | 224                        | 0.0%                                 |
| 7    | AN, W   | 4                          | 0.0%                                 |
| 8    | D, D  | 289                        | 0.0%                                 |
| 9    | W, W  | -172                       | 0.0%                                 |
| 10   | W, W  | -40                        | 0.0%                                 |
| 11   | W, AN   | -154                       | 0.0%                                 |
| 12   | D, D  | -112                       | 0.0%                                 |
| 13   | W, W  | 173                        | 0.0%                                 |
| 14   | D, D  | -239                       | 0.0%                                 |
| 15   | C, C  | 219                        | 0.0%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 16             | D, C  | 88                         | 0.0%                                 |
| 17             | C, C  | -1,055                     | -0.1%                                |
| 18             | C, C  | -1,258                     | -0.1%                                |
| 19             | C, C  | 446                        | 0.0%                                 |
| 20             | AN, W   | -31                        | 0.0%                                 |
| 21             | C, C  | -485                       | 0.0%                                 |
| 22             | W, W  | 153                        | 0.0%                                 |
| 23             | W, W  | 322                        | 0.0%                                 |
| 24             | W, W  | -143                       | 0.0%                                 |
| 25             | W, W  | -494                       | 0.0%                                 |
| 26             | W, AN   | -233                       | 0.0%                                 |
| 27             | AN, AN  | -33                        | 0.0%                                 |
| 28             | D, D  | 419                        | 0.0%                                 |
| 29             | D, D  | -693                       | 0.0%                                 |
| 30             | AN, BN  | 469                        | 0.0%                                 |
| 31             | BN, D   | -432                       | 0.0%                                 |
| 32             | AN, W   | -628                       | 0.0%                                 |
| 33             | W, W  | -484                       | 0.0%                                 |
| 34             | D, C  | 236                        | 0.0%                                 |
| 35             | C, C  | -258                       | 0.0%                                 |
| 36             | D, BN   | 311                        | 0.0%                                 |
| 37             | BN, AN  | -588                       | 0.0%                                 |
| 38             | W, W  | 437                        | 0.0%                                 |
| 39             | BN, D   | -225                       | 0.0%                                 |
| 40             | D, C  | -436                       | 0.0%                                 |
| 41             | C, C  | -3,993                     | -0.2%                                |
| 42             | C, C  | -307                       | 0.0%                                 |
| <b>Average</b> |   | <b>-253</b>                | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>469</b>                 | <b>0.0%</b>                          |
| <b>Minimum</b> |   | <b>-3,993</b>              | <b>-0.2%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-56. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 14 (SR14) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | -19,968                    | -9.2%                                |
| 2    | W, W  | -29,102                    | -8.7%                                |
| 3    | C, C  | 29,891                     | 4.6%                                 |
| 4    | C, C  | 20,633                     | 1.6%                                 |
| 5    | AN, W   | -2,622                     | -0.7%                                |
| 6    | BN, AN  | -4,640                     | -1.0%                                |
| 7    | AN, W   | -2,088                     | -0.9%                                |
| 8    | D, D  | 22,034                     | 4.7%                                 |
| 9    | W, W  | 2,970                      | 1.0%                                 |
| 10   | W, W  | 8                          | 0.0%                                 |
| 11   | W, AN   | -6,793                     | -3.5%                                |
| 12   | D, D  | 14,446                     | 2.9%                                 |
| 13   | W, W  | 7,912                      | 3.1%                                 |
| 14   | D, D  | 24,723                     | 4.9%                                 |
| 15   | C, C  | 87,992                     | 12.2%                                |
| 16   | D, C  | 24,587                     | 3.3%                                 |
| 17   | C, C  | 5,119                      | 0.5%                                 |
| 18   | C, C  | -540                       | 0.0%                                 |
| 19   | C, C  | 433                        | 0.0%                                 |
| 20   | AN, W   | -123,509                   | -20.2%                               |
| 21   | C, C  | 80,069                     | 9.9%                                 |
| 22   | W, W  | 16,206                     | 4.7%                                 |
| 23   | W, W  | 3,641                      | 1.3%                                 |
| 24   | W, W  | -43,007                    | -16.4%                               |
| 25   | W, W  | -5,344                     | -2.5%                                |
| 26   | W, AN   | -7,202                     | -3.0%                                |
| 27   | AN, AN  | -21,152                    | -3.6%                                |
| 28   | D, D  | 17,720                     | 2.3%                                 |
| 29   | D, D  | 18,724                     | 2.4%                                 |
| 30   | AN, BN  | 13,900                     | 2.1%                                 |
| 31   | BN, D   | 41,246                     | 5.7%                                 |
| 32   | AN, W   | -20,969                    | -6.0%                                |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | -5,211                     | -2.4%                                |
| 34             | D, C  | 3,544                      | 0.6%                                 |
| 35             | C, C  | 41,394                     | 4.8%                                 |
| 36             | D, BN   | 15,424                     | 1.3%                                 |
| 37             | BN, AN  | 20,725                     | 2.6%                                 |
| 38             | W, W  | 4,728                      | 1.6%                                 |
| 39             | BN, D   | -57,773                    | -13.2%                               |
| 40             | D, C  | 38,920                     | 5.0%                                 |
| 41             | C, C  | 37,471                     | 3.1%                                 |
| 42             | C, C  | -240                       | 0.0%                                 |
| <b>Average</b> |   | <b>5,817</b>               | <b>-0.1%</b>                         |
| <b>Maximum</b> |   | <b>87,992</b>              | <b>12.2%</b>                         |
| <b>Minimum</b> |   | <b>-123,509</b>            | <b>-20.2%</b>                        |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-57. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 15 (SR15) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 2,722                      | 0.2%                                 |
| 2    | W, W  | -3,849                     | -0.3%                                |
| 3    | C, C  | 240                        | 0.0%                                 |
| 4    | C, C  | -4,458                     | -0.2%                                |
| 5    | AN, W   | -3,209                     | -0.2%                                |
| 6    | BN, AN  | -1,566                     | -0.1%                                |
| 7    | AN, W   | -2,212                     | -0.2%                                |
| 8    | D, D  | -1,600                     | -0.1%                                |
| 9    | W, W  | -5,717                     | -0.5%                                |
| 10   | W, W  | -289                       | 0.0%                                 |
| 11   | W, AN   | -402                       | 0.0%                                 |
| 12   | D, D  | -3,146                     | -0.2%                                |
| 13   | W, W  | 1,047                      | 0.1%                                 |
| 14   | D, D  | 1,346                      | 0.1%                                 |
| 15   | C, C  | 3,837                      | 0.2%                                 |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 16             | D, C  | -216                       | 0.0%                                 |
| 17             | C, C  | -629                       | 0.0%                                 |
| 18             | C, C  | -5,179                     | -0.3%                                |
| 19             | C, C  | 3,263                      | 0.2%                                 |
| 20             | AN, W   | -3,574                     | -0.3%                                |
| 21             | C, C  | 398                        | 0.0%                                 |
| 22             | W, W  | 321                        | 0.0%                                 |
| 23             | W, W  | -8,110                     | -0.6%                                |
| 24             | W, W  | -3,187                     | -0.2%                                |
| 25             | W, W  | -1,078                     | -0.1%                                |
| 26             | W, AN   | 1,876                      | 0.1%                                 |
| 27             | AN, AN  | -8,290                     | -0.6%                                |
| 28             | D, D  | -1,151                     | -0.1%                                |
| 29             | D, D  | -1,496                     | -0.1%                                |
| 30             | AN, BN  | 1,349                      | 0.1%                                 |
| 31             | BN, D   | -10,196                    | -0.6%                                |
| 32             | AN, W   | -1,977                     | -0.2%                                |
| 33             | W, W  | -129                       | 0.0%                                 |
| 34             | D, C  | -7,458                     | -0.4%                                |
| 35             | C, C  | -157                       | 0.0%                                 |
| 36             | D, BN   | -1,227                     | -0.1%                                |
| 37             | BN, AN  | -1,064                     | -0.1%                                |
| 38             | W, W  | -5,983                     | -0.5%                                |
| 39             | BN, D   | -862                       | -0.1%                                |
| 40             | D, C  | 4,673                      | 0.2%                                 |
| 41             | C, C  | 786                        | 0.0%                                 |
| 42             | C, C  | -1,250                     | -0.1%                                |
| <b>Average</b> |   | <b>-1,614</b>              | <b>-0.1%</b>                         |
| <b>Maximum</b> |   | <b>4,673</b>               | <b>0.2%</b>                          |
| <b>Minimum</b> |   | <b>-10,196</b>             | <b>-0.6%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-58. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 16 (SR16) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 0                          | 0.0%                                 |
| 2    | W, W  | 12                         | 0.0%                                 |
| 3    | C, C  | -98                        | 0.0%                                 |
| 4    | C, C  | 44                         | 0.0%                                 |
| 5    | AN, W   | -6                         | 0.0%                                 |
| 6    | BN, AN  | 0                          | 0.0%                                 |
| 7    | AN, W   | 1                          | 0.0%                                 |
| 8    | D, D  | 13                         | 0.0%                                 |
| 9    | W, W  | -16                        | 0.0%                                 |
| 10   | W, W  | 0                          | 0.0%                                 |
| 11   | W, AN   | 0                          | 0.0%                                 |
| 12   | D, D  | 0                          | 0.0%                                 |
| 13   | W, W  | 74                         | 0.1%                                 |
| 14   | D, D  | -69                        | 0.0%                                 |
| 15   | C, C  | 118                        | 0.1%                                 |
| 16   | D, C  | -15                        | 0.0%                                 |
| 17   | C, C  | 44                         | 0.0%                                 |
| 18   | C, C  | 50                         | 0.0%                                 |
| 19   | C, C  | 23                         | 0.0%                                 |
| 20   | AN, W   | -70                        | -0.1%                                |
| 21   | C, C  | -18                        | 0.0%                                 |
| 22   | W, W  | 33                         | 0.0%                                 |
| 23   | W, W  | 0                          | 0.0%                                 |
| 24   | W, W  | 8                          | 0.0%                                 |
| 25   | W, W  | -35                        | 0.0%                                 |
| 26   | W, AN   | 0                          | 0.0%                                 |
| 27   | AN, AN  | -11                        | 0.0%                                 |
| 28   | D, D  | 1                          | 0.0%                                 |
| 29   | D, D  | -32                        | 0.0%                                 |
| 30   | AN, BN  | 68                         | 0.0%                                 |
| 31   | BN, D   | 6                          | 0.0%                                 |
| 32   | AN, W   | -20                        | 0.0%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | 39                         | 0.1%                                 |
| 34             | D, C  | -3                         | 0.0%                                 |
| 35             | C, C  | 0                          | 0.0%                                 |
| 36             | D, BN   | 153                        | 0.1%                                 |
| 37             | BN, AN  | -44                        | 0.0%                                 |
| 38             | W, W  | -4                         | 0.0%                                 |
| 39             | BN, D   | -60                        | 0.0%                                 |
| 40             | D, C  | 36                         | 0.0%                                 |
| 41             | C, C  | 12                         | 0.0%                                 |
| 42             | C, C  | -60                        | 0.0%                                 |
| <b>Average</b> |   | <b>4</b>                   | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>153</b>                 | <b>0.1%</b>                          |
| <b>Minimum</b> |   | <b>-98</b>                 | <b>-0.1%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-59. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 17 (SR17) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 1                          | 0.0%                                 |
| 2    | W, W  | -89                        | 0.0%                                 |
| 3    | C, C  | -7                         | 0.0%                                 |
| 4    | C, C  | 28                         | 0.0%                                 |
| 5    | AN, W   | 20                         | 0.0%                                 |
| 6    | BN, AN  | 24                         | 0.0%                                 |
| 7    | AN, W   | 1                          | 0.0%                                 |
| 8    | D, D  | -8                         | 0.0%                                 |
| 9    | W, W  | 13                         | 0.0%                                 |
| 10   | W, W  | 5                          | 0.0%                                 |
| 11   | W, AN   | 17                         | 0.0%                                 |
| 12   | D, D  | -37                        | 0.0%                                 |
| 13   | W, W  | -61                        | 0.0%                                 |
| 14   | D, D  | -82                        | 0.0%                                 |
| 15   | C, C  | -122                       | 0.0%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 16             | D, C  | 7                          | 0.0%                                 |
| 17             | C, C  | 15                         | 0.0%                                 |
| 18             | C, C  | 0                          | 0.0%                                 |
| 19             | C, C  | -6                         | 0.0%                                 |
| 20             | AN, W   | -14                        | 0.0%                                 |
| 21             | C, C  | -35                        | 0.0%                                 |
| 22             | W, W  | 9                          | 0.0%                                 |
| 23             | W, W  | -26                        | 0.0%                                 |
| 24             | W, W  | 11                         | 0.0%                                 |
| 25             | W, W  | -37                        | 0.0%                                 |
| 26             | W, AN   | 53                         | 0.0%                                 |
| 27             | AN, AN  | -19                        | 0.0%                                 |
| 28             | D, D  | -42                        | 0.0%                                 |
| 29             | D, D  | 13                         | 0.0%                                 |
| 30             | AN, BN  | -104                       | 0.0%                                 |
| 31             | BN, D   | 17                         | 0.0%                                 |
| 32             | AN, W   | 123                        | 0.1%                                 |
| 33             | W, W  | -53                        | 0.0%                                 |
| 34             | D, C  | -183                       | 0.0%                                 |
| 35             | C, C  | -10                        | 0.0%                                 |
| 36             | D, BN   | -89                        | 0.0%                                 |
| 37             | BN, AN  | 108                        | 0.0%                                 |
| 38             | W, W  | 2                          | 0.0%                                 |
| 39             | BN, D   | 10                         | 0.0%                                 |
| 40             | D, C  | 46                         | 0.0%                                 |
| 41             | C, C  | -13                        | 0.0%                                 |
| 42             | C, C  | 54                         | 0.0%                                 |
| <b>Average</b> |   | <b>-11</b>                 | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>123</b>                 | <b>0.1%</b>                          |
| <b>Minimum</b> |   | <b>-183</b>                | <b>0.0%</b>                          |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-60. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 18 (SR18) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | -28                        | 0.0%                                 |
| 2    | W, W  | -54                        | 0.0%                                 |
| 3    | C, C  | 75                         | 0.0%                                 |
| 4    | C, C  | 9                          | 0.0%                                 |
| 5    | AN, W   | -52                        | 0.0%                                 |
| 6    | BN, AN  | -15                        | 0.0%                                 |
| 7    | AN, W   | -130                       | 0.0%                                 |
| 8    | D, D  | -231                       | 0.0%                                 |
| 9    | W, W  | -17                        | 0.0%                                 |
| 10   | W, W  | -5                         | 0.0%                                 |
| 11   | W, AN   | -234                       | 0.0%                                 |
| 12   | D, D  | 147                        | 0.0%                                 |
| 13   | W, W  | -56                        | 0.0%                                 |
| 14   | D, D  | 49                         | 0.0%                                 |
| 15   | C, C  | -38                        | 0.0%                                 |
| 16   | D, C  | 386                        | 0.0%                                 |
| 17   | C, C  | 13                         | 0.0%                                 |
| 18   | C, C  | 142                        | 0.0%                                 |
| 19   | C, C  | 154                        | 0.0%                                 |
| 20   | AN, W   | -136                       | 0.0%                                 |
| 21   | C, C  | 35                         | 0.0%                                 |
| 22   | W, W  | -38                        | 0.0%                                 |
| 23   | W, W  | 30                         | 0.0%                                 |
| 24   | W, W  | 76                         | 0.0%                                 |
| 25   | W, W  | -102                       | 0.0%                                 |
| 26   | W, AN   | -140                       | 0.0%                                 |
| 27   | AN, AN  | -176                       | 0.0%                                 |
| 28   | D, D  | -72                        | 0.0%                                 |
| 29   | D, D  | 97                         | 0.0%                                 |
| 30   | AN, BN  | -22                        | 0.0%                                 |
| 31   | BN, D   | -134                       | 0.0%                                 |
| 32   | AN, W   | -43                        | 0.0%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | -240                       | 0.0%                                 |
| 34             | D, C  | 218                        | 0.0%                                 |
| 35             | C, C  | -121                       | 0.0%                                 |
| 36             | D, BN   | 8                          | 0.0%                                 |
| 37             | BN, AN  | -4                         | 0.0%                                 |
| 38             | W, W  | -38                        | 0.0%                                 |
| 39             | BN, D   | -235                       | 0.0%                                 |
| 40             | D, C  | -39                        | 0.0%                                 |
| 41             | C, C  | 218                        | 0.0%                                 |
| 42             | C, C  | -17                        | 0.0%                                 |
| <b>Average</b> |   | <b>-18</b>                 | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>386</b>                 | <b>0.0%</b>                          |
| <b>Minimum</b> |   | <b>-240</b>                | <b>0.0%</b>                          |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-61. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 19 (SR19) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 0                          | 0.0%                                 |
| 2    | W, W  | 0                          | 0.0%                                 |
| 3    | C, C  | -36                        | 0.0%                                 |
| 4    | C, C  | 17                         | 0.0%                                 |
| 5    | AN, W   | 0                          | 0.0%                                 |
| 6    | BN, AN  | 0                          | 0.0%                                 |
| 7    | AN, W   | -10                        | 0.0%                                 |
| 8    | D, D  | -20                        | 0.0%                                 |
| 9    | W, W  | 0                          | 0.0%                                 |
| 10   | W, W  | 0                          | 0.0%                                 |
| 11   | W, AN   | 74                         | 0.0%                                 |
| 12   | D, D  | 10                         | 0.0%                                 |
| 13   | W, W  | -10                        | 0.0%                                 |
| 14   | D, D  | 29                         | 0.0%                                 |
| 15   | C, C  | 43                         | 0.0%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 16             | D, C  | -300                       | -0.1%                                |
| 17             | C, C  | 0                          | 0.0%                                 |
| 18             | C, C  | 37                         | 0.0%                                 |
| 19             | C, C  | 0                          | 0.0%                                 |
| 20             | AN, W   | 0                          | 0.0%                                 |
| 21             | C, C  | 2                          | 0.0%                                 |
| 22             | W, W  | 0                          | 0.0%                                 |
| 23             | W, W  | -23                        | 0.0%                                 |
| 24             | W, W  | 75                         | 0.0%                                 |
| 25             | W, W  | -113                       | -0.1%                                |
| 26             | W, AN   | -19                        | 0.0%                                 |
| 27             | AN, AN  | 16                         | 0.0%                                 |
| 28             | D, D  | -15                        | 0.0%                                 |
| 29             | D, D  | 10                         | 0.0%                                 |
| 30             | AN, BN  | 0                          | 0.0%                                 |
| 31             | BN, D   | 18                         | 0.0%                                 |
| 32             | AN, W   | 0                          | 0.0%                                 |
| 33             | W, W  | -15                        | 0.0%                                 |
| 34             | D, C  | -14                        | 0.0%                                 |
| 35             | C, C  | 0                          | 0.0%                                 |
| 36             | D, BN   | 0                          | 0.0%                                 |
| 37             | BN, AN  | -26                        | 0.0%                                 |
| 38             | W, W  | -42                        | 0.0%                                 |
| 39             | BN, D   | 0                          | 0.0%                                 |
| 40             | D, C  | -14                        | 0.0%                                 |
| 41             | C, C  | 0                          | 0.0%                                 |
| 42             | C, C  | 0                          | 0.0%                                 |
| <b>Average</b> |   | <b>-8</b>                  | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>75</b>                  | <b>0.0%</b>                          |
| <b>Minimum</b> |   | <b>-300</b>                | <b>-0.1%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-62. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 20 (SR20) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | -1                         | 0.0%                                 |
| 2    | W, W  | 0                          | 0.0%                                 |
| 3    | C, C  | 0                          | 0.0%                                 |
| 4    | C, C  | 0                          | 0.0%                                 |
| 5    | AN, W   | 0                          | 0.0%                                 |
| 6    | BN, AN  | 0                          | 0.0%                                 |
| 7    | AN, W   | -129                       | 0.0%                                 |
| 8    | D, D  | 0                          | 0.0%                                 |
| 9    | W, W  | 0                          | 0.0%                                 |
| 10   | W, W  | 0                          | 0.0%                                 |
| 11   | W, AN   | 0                          | 0.0%                                 |
| 12   | D, D  | 0                          | 0.0%                                 |
| 13   | W, W  | 0                          | 0.0%                                 |
| 14   | D, D  | -3                         | 0.0%                                 |
| 15   | C, C  | 1                          | 0.0%                                 |
| 16   | D, C  | 104                        | 0.0%                                 |
| 17   | C, C  | 36                         | 0.0%                                 |
| 18   | C, C  | 0                          | 0.0%                                 |
| 19   | C, C  | 113                        | 0.0%                                 |
| 20   | AN, W   | -47                        | 0.0%                                 |
| 21   | C, C  | -7                         | 0.0%                                 |
| 22   | W, W  | -11                        | 0.0%                                 |
| 23   | W, W  | -2                         | 0.0%                                 |
| 24   | W, W  | 21                         | 0.0%                                 |
| 25   | W, W  | -25                        | 0.0%                                 |
| 26   | W, AN   | -16                        | 0.0%                                 |
| 27   | AN, AN  | 0                          | 0.0%                                 |
| 28   | D, D  | 0                          | 0.0%                                 |
| 29   | D, D  | 0                          | 0.0%                                 |
| 30   | AN, BN  | 0                          | 0.0%                                 |
| 31   | BN, D   | 72                         | 0.0%                                 |
| 32   | AN, W   | 140                        | 0.0%                                 |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | -142                       | 0.0%                                 |
| 34             | D, C  | -1                         | 0.0%                                 |
| 35             | C, C  | 20                         | 0.0%                                 |
| 36             | D, BN   | 0                          | 0.0%                                 |
| 37             | BN, AN  | 17                         | 0.0%                                 |
| 38             | W, W  | 2                          | 0.0%                                 |
| 39             | BN, D   | -55                        | 0.0%                                 |
| 40             | D, C  | 0                          | 0.0%                                 |
| 41             | C, C  | 13                         | 0.0%                                 |
| 42             | C, C  | -4                         | 0.0%                                 |
| <b>Average</b> |   | <b>2</b>                   | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>140</b>                 | <b>0.0%</b>                          |
| <b>Minimum</b> |   | <b>-142</b>                | <b>0.0%</b>                          |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-63. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 21 (SR21) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 39                         | 0.0%                                 |
| 2    | W, W  | 3                          | 0.0%                                 |
| 3    | C, C  | 0                          | 0.0%                                 |
| 4    | C, C  | -71                        | 0.0%                                 |
| 5    | AN, W   | 121                        | 0.0%                                 |
| 6    | BN, AN  | -46                        | 0.0%                                 |
| 7    | AN, W   | 59                         | 0.0%                                 |
| 8    | D, D  | 20                         | 0.0%                                 |
| 9    | W, W  | 24                         | 0.0%                                 |
| 10   | W, W  | -38                        | 0.0%                                 |
| 11   | W, AN   | 28                         | 0.0%                                 |
| 12   | D, D  | -78                        | 0.0%                                 |
| 13   | W, W  | -24                        | 0.0%                                 |
| 14   | D, D  | -32                        | 0.0%                                 |
| 15   | C, C  | 282                        | 0.0%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 16             | D, C  | 26                         | 0.0%                                 |
| 17             | C, C  | -141                       | 0.0%                                 |
| 18             | C, C  | -370                       | 0.0%                                 |
| 19             | C, C  | 101                        | 0.0%                                 |
| 20             | AN, W   | -47                        | 0.0%                                 |
| 21             | C, C  | 20                         | 0.0%                                 |
| 22             | W, W  | 0                          | 0.0%                                 |
| 23             | W, W  | 45                         | 0.0%                                 |
| 24             | W, W  | 29                         | 0.0%                                 |
| 25             | W, W  | -20                        | 0.0%                                 |
| 26             | W, AN   | 44                         | 0.0%                                 |
| 27             | AN, AN  | 30                         | 0.0%                                 |
| 28             | D, D  | -130                       | 0.0%                                 |
| 29             | D, D  | 0                          | 0.0%                                 |
| 30             | AN, BN  | 14                         | 0.0%                                 |
| 31             | BN, D   | -69                        | 0.0%                                 |
| 32             | AN, W   | -244                       | 0.0%                                 |
| 33             | W, W  | 42                         | 0.0%                                 |
| 34             | D, C  | -10                        | 0.0%                                 |
| 35             | C, C  | 44                         | 0.0%                                 |
| 36             | D, BN   | 31                         | 0.0%                                 |
| 37             | BN, AN  | 0                          | 0.0%                                 |
| 38             | W, W  | 134                        | 0.0%                                 |
| 39             | BN, D   | -52                        | 0.0%                                 |
| 40             | D, C  | 1                          | 0.0%                                 |
| 41             | C, C  | 7                          | 0.0%                                 |
| 42             | C, C  | 5                          | 0.0%                                 |
| <b>Average</b> |   | <b>-5</b>                  | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>282</b>                 | <b>0.0%</b>                          |
| <b>Minimum</b> |   | <b>-370</b>                | <b>0.0%</b>                          |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

**I-1.1.4 Changes in Groundwater Pumping, Alternative 2 without TUCP Without VA Compared to No Action Alternative**

Table I.1-64 through Table I.1-84 provide the annual simulated groundwater pumping through the model simulation period for each of the 21 model subregions for Alternative 2 without TUCP without VA compared to the No Action Alternative.

Table I.1-64. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 1 (SR1) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 51                    | 0.1%                            |
| 2    | W, W  | -38                   | -0.1%                           |
| 3    | C, C  | 1,060                 | 1.7%                            |
| 4    | C, C  | 6,551                 | 8.6%                            |
| 5    | AN, W   | 72                    | 0.1%                            |
| 6    | BN, AN  | 754                   | 1.2%                            |
| 7    | AN, W   | 162                   | 0.3%                            |
| 8    | D, D  | -200                  | -0.3%                           |
| 9    | W, W  | -57                   | -0.1%                           |
| 10   | W, W  | -42                   | -0.1%                           |
| 11   | W, AN   | 7                     | 0.0%                            |
| 12   | D, D  | 514                   | 0.8%                            |
| 13   | W, W  | 59                    | 0.1%                            |
| 14   | D, D  | 1,740                 | 2.4%                            |
| 15   | C, C  | 3,612                 | 4.8%                            |
| 16   | D, C  | 528                   | 0.8%                            |
| 17   | C, C  | -3,235                | -4.5%                           |
| 18   | C, C  | 4,289                 | 5.2%                            |
| 19   | C, C  | 2,202                 | 2.5%                            |
| 20   | AN, W   | 323                   | 0.5%                            |
| 21   | C, C  | 4,565                 | 6.4%                            |
| 22   | W, W  | 1,391                 | 2.2%                            |
| 23   | W, W  | 28                    | 0.0%                            |
| 24   | W, W  | 55                    | 0.1%                            |
| 25   | W, W  | -48                   | -0.1%                           |
| 26   | W, AN   | -188                  | -0.3%                           |
| 27   | AN, AN  | -62                   | -0.1%                           |
| 28   | D, D  | 1,362                 | 2.2%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 29             | D, D  | 529                   | 0.8%                            |
| 30             | AN, BN  | 10                    | 0.0%                            |
| 31             | BN, D   | -45                   | -0.1%                           |
| 32             | AN, W   | 10                    | 0.0%                            |
| 33             | W, W  | 32                    | 0.1%                            |
| 34             | D, C  | 89                    | 0.1%                            |
| 35             | C, C  | 3,359                 | 4.8%                            |
| 36             | D, BN   | 757                   | 1.1%                            |
| 37             | BN, AN  | -2                    | 0.0%                            |
| 38             | W, W  | -2                    | 0.0%                            |
| 39             | BN, D   | -20                   | 0.0%                            |
| 40             | D, C  | 3,638                 | 5.2%                            |
| 41             | C, C  | 6,910                 | 8.1%                            |
| 42             | C, C  | -46                   | -0.1%                           |
| <b>Average</b> |   | <b>968</b>            | <b>1.3%</b>                     |
| <b>Maximum</b> |   | <b>6,910</b>          | <b>8.6%</b>                     |
| <b>Minimum</b> |   | <b>-3,235</b>         | <b>-4.5%</b>                    |

AF = thousand acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-65. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 2 (SR2) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -10                   | 0.0%                            |
| 2    | W, W  | 102                   | 0.0%                            |
| 3    | C, C  | 3,109                 | 0.6%                            |
| 4    | C, C  | 4,712                 | 0.7%                            |
| 5    | AN, W   | 623                   | 0.1%                            |
| 6    | BN, AN  | 1,613                 | 0.3%                            |
| 7    | AN, W   | 304                   | 0.1%                            |
| 8    | D, D  | -887                  | -0.2%                           |
| 9    | W, W  | -122                  | 0.0%                            |
| 10   | W, W  | -41                   | 0.0%                            |
| 11   | W, AN   | -6                    | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 12             | D, D  | 2,943                 | 0.5%                            |
| 13             | W, W  | 977                   | 0.2%                            |
| 14             | D, D  | 4,075                 | 0.7%                            |
| 15             | C, C  | 10,726                | 1.7%                            |
| 16             | D, C  | 1,702                 | 0.3%                            |
| 17             | C, C  | 3,002                 | 0.6%                            |
| 18             | C, C  | 5,769                 | 1.0%                            |
| 19             | C, C  | 1,072                 | 0.2%                            |
| 20             | AN, W   | -38                   | 0.0%                            |
| 21             | C, C  | 12,095                | 2.2%                            |
| 22             | W, W  | 3,399                 | 0.7%                            |
| 23             | W, W  | 14                    | 0.0%                            |
| 24             | W, W  | 10                    | 0.0%                            |
| 25             | W, W  | 1                     | 0.0%                            |
| 26             | W, AN   | 37                    | 0.0%                            |
| 27             | AN, AN  | 26                    | 0.0%                            |
| 28             | D, D  | 3,137                 | 0.6%                            |
| 29             | D, D  | 437                   | 0.1%                            |
| 30             | AN, BN  | -18                   | 0.0%                            |
| 31             | BN, D   | -766                  | -0.1%                           |
| 32             | AN, W   | -4                    | 0.0%                            |
| 33             | W, W  | 5                     | 0.0%                            |
| 34             | D, C  | 224                   | 0.0%                            |
| 35             | C, C  | 7,576                 | 1.3%                            |
| 36             | D, BN   | 1,713                 | 0.3%                            |
| 37             | BN, AN  | -26                   | 0.0%                            |
| 38             | W, W  | -9                    | 0.0%                            |
| 39             | BN, D   | -1                    | 0.0%                            |
| 40             | D, C  | 7,417                 | 1.2%                            |
| 41             | C, C  | 5,955                 | 0.9%                            |
| 42             | C, C  | 5,509                 | 0.9%                            |
| <b>Average</b> |   | <b>2,056</b>          | <b>0.4%</b>                     |
| <b>Maximum</b> |   | <b>12,095</b>         | <b>2.2%</b>                     |
| <b>Minimum</b> |   | <b>-887</b>           | <b>-0.2%</b>                    |

AF = thousand acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-66. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 3 (SR3) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -27                   | 0.0%                            |
| 2    | W, W  | 1,243                 | 0.4%                            |
| 3    | C, C  | 17,217                | 3.8%                            |
| 4    | C, C  | 74,642                | 13.0%                           |
| 5    | AN, W   | 5,226                 | 1.5%                            |
| 6    | BN, AN  | 8,946                 | 2.4%                            |
| 7    | AN, W   | 1,585                 | 0.5%                            |
| 8    | D, D  | -4,774                | -1.3%                           |
| 9    | W, W  | -477                  | -0.2%                           |
| 10   | W, W  | 94                    | 0.0%                            |
| 11   | W, AN   | 375                   | 0.1%                            |
| 12   | D, D  | 15,815                | 4.0%                            |
| 13   | W, W  | 9,823                 | 2.9%                            |
| 14   | D, D  | 22,555                | 5.4%                            |
| 15   | C, C  | 55,204                | 12.4%                           |
| 16   | D, C  | 5,912                 | 1.5%                            |
| 17   | C, C  | 25,195                | 5.3%                            |
| 18   | C, C  | 90,211                | 16.9%                           |
| 19   | C, C  | 8,684                 | 1.4%                            |
| 20   | AN, W   | -132                  | 0.0%                            |
| 21   | C, C  | 68,637                | 17.1%                           |
| 22   | W, W  | 14,819                | 4.6%                            |
| 23   | W, W  | 188                   | 0.1%                            |
| 24   | W, W  | 163                   | 0.1%                            |
| 25   | W, W  | 52                    | 0.0%                            |
| 26   | W, AN   | 643                   | 0.2%                            |
| 27   | AN, AN  | 407                   | 0.1%                            |
| 28   | D, D  | 16,694                | 4.5%                            |
| 29   | D, D  | -3,731                | -1.0%                           |
| 30   | AN, BN  | -48                   | 0.0%                            |
| 31   | BN, D   | -10,211               | -3.0%                           |
| 32   | AN, W   | -307                  | -0.1%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 82                    | 0.0%                            |
| 34             | D, C  | 3,188                 | 0.9%                            |
| 35             | C, C  | 41,059                | 10.0%                           |
| 36             | D, BN   | 8,413                 | 1.9%                            |
| 37             | BN, AN  | 257                   | 0.1%                            |
| 38             | W, W  | 12                    | 0.0%                            |
| 39             | BN, D   | -10                   | 0.0%                            |
| 40             | D, C  | 38,325                | 9.4%                            |
| 41             | C, C  | 86,712                | 14.9%                           |
| 42             | C, C  | 15,426                | 2.6%                            |
| <b>Average</b> |   | <b>14,716</b>         | <b>3.2%</b>                     |
| <b>Maximum</b> |   | <b>90,211</b>         | <b>17.1%</b>                    |
| <b>Minimum</b> |   | <b>-10,211</b>        | <b>-3.0%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-67. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 4 (SR4) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -52                   | 0.0%                            |
| 2    | W, W  | 24                    | 0.0%                            |
| 3    | C, C  | 82                    | 0.0%                            |
| 4    | C, C  | 34,145                | 9.1%                            |
| 5    | AN, W   | 1,175                 | 0.3%                            |
| 6    | BN, AN  | 1,027                 | 0.3%                            |
| 7    | AN, W   | -7,124                | -2.2%                           |
| 8    | D, D  | -420                  | -0.1%                           |
| 9    | W, W  | 10,925                | 3.6%                            |
| 10   | W, W  | 0                     | 0.0%                            |
| 11   | W, AN   | 10                    | 0.0%                            |
| 12   | D, D  | 28                    | 0.0%                            |
| 13   | W, W  | 18                    | 0.0%                            |
| 14   | D, D  | 44                    | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 1,079                 | 0.3%                            |
| 16             | D, C  | -803                  | -0.2%                           |
| 17             | C, C  | -14,010               | -4.4%                           |
| 18             | C, C  | 30,597                | 9.3%                            |
| 19             | C, C  | 2,026                 | 0.6%                            |
| 20             | AN, W   | -153                  | 0.0%                            |
| 21             | C, C  | 936                   | 0.3%                            |
| 22             | W, W  | 27                    | 0.0%                            |
| 23             | W, W  | 3                     | 0.0%                            |
| 24             | W, W  | 0                     | 0.0%                            |
| 25             | W, W  | 0                     | 0.0%                            |
| 26             | W, AN   | 4                     | 0.0%                            |
| 27             | AN, AN  | 2,513                 | 0.8%                            |
| 28             | D, D  | 45                    | 0.0%                            |
| 29             | D, D  | 8                     | 0.0%                            |
| 30             | AN, BN  | -4                    | 0.0%                            |
| 31             | BN, D   | -496                  | -0.1%                           |
| 32             | AN, W   | -3                    | 0.0%                            |
| 33             | W, W  | 978                   | 0.3%                            |
| 34             | D, C  | 6                     | 0.0%                            |
| 35             | C, C  | 39                    | 0.0%                            |
| 36             | D, BN   | -980                  | -0.3%                           |
| 37             | BN, AN  | 16                    | 0.0%                            |
| 38             | W, W  | 40                    | 0.0%                            |
| 39             | BN, D   | 27                    | 0.0%                            |
| 40             | D, C  | 61                    | 0.0%                            |
| 41             | C, C  | 37,847                | 9.9%                            |
| 42             | C, C  | 6,158                 | 1.7%                            |
| <b>Average</b> |   | <b>2,520</b>          | <b>0.7%</b>                     |
| <b>Maximum</b> |   | <b>37,847</b>         | <b>9.9%</b>                     |
| <b>Minimum</b> |   | <b>-14,010</b>        | <b>-4.4%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-68. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 5 (SR5) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -83                   | 0.0%                            |
| 2    | W, W  | 46                    | 0.0%                            |
| 3    | C, C  | 1,172                 | 0.3%                            |
| 4    | C, C  | 377                   | 0.1%                            |
| 5    | AN, W   | 553                   | 0.1%                            |
| 6    | BN, AN  | 640                   | 0.2%                            |
| 7    | AN, W   | -62                   | 0.0%                            |
| 8    | D, D  | -236                  | 0.0%                            |
| 9    | W, W  | 70                    | 0.0%                            |
| 10   | W, W  | 46                    | 0.0%                            |
| 11   | W, AN   | 124                   | 0.0%                            |
| 12   | D, D  | 687                   | 0.1%                            |
| 13   | W, W  | 224                   | 0.1%                            |
| 14   | D, D  | 1,844                 | 0.4%                            |
| 15   | C, C  | 4,306                 | 0.9%                            |
| 16   | D, C  | -3,259                | -0.7%                           |
| 17   | C, C  | 263                   | 0.1%                            |
| 18   | C, C  | -577                  | -0.1%                           |
| 19   | C, C  | -178                  | 0.0%                            |
| 20   | AN, W   | 1,889                 | 0.5%                            |
| 21   | C, C  | 5,105                 | 1.1%                            |
| 22   | W, W  | 1,169                 | 0.3%                            |
| 23   | W, W  | 162                   | 0.0%                            |
| 24   | W, W  | 35                    | 0.0%                            |
| 25   | W, W  | 129                   | 0.0%                            |
| 26   | W, AN   | -54                   | 0.0%                            |
| 27   | AN, AN  | 181                   | 0.0%                            |
| 28   | D, D  | 1,169                 | 0.2%                            |
| 29   | D, D  | 421                   | 0.1%                            |
| 30   | AN, BN  | -471                  | -0.1%                           |
| 31   | BN, D   | -26                   | 0.0%                            |
| 32   | AN, W   | 110                   | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -47                   | 0.0%                            |
| 34             | D, C  | 167                   | 0.0%                            |
| 35             | C, C  | 3,167                 | 0.7%                            |
| 36             | D, BN   | 626                   | 0.1%                            |
| 37             | BN, AN  | -89                   | 0.0%                            |
| 38             | W, W  | -108                  | 0.0%                            |
| 39             | BN, D   | -20                   | 0.0%                            |
| 40             | D, C  | 3,020                 | 0.6%                            |
| 41             | C, C  | 714                   | 0.1%                            |
| 42             | C, C  | 18,377                | 3.1%                            |
| <b>Average</b> |   | <b>990</b>            | <b>0.2%</b>                     |
| <b>Maximum</b> |   | <b>18,377</b>         | <b>3.1%</b>                     |
| <b>Minimum</b> |   | <b>-3,259</b>         | <b>-0.7%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-69. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 6 (SR6) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -184                  | 0.0%                            |
| 2    | W, W  | 551                   | 0.1%                            |
| 3    | C, C  | 484                   | 0.1%                            |
| 4    | C, C  | -1,983                | -0.2%                           |
| 5    | AN, W   | 96                    | 0.0%                            |
| 6    | BN, AN  | 502                   | 0.1%                            |
| 7    | AN, W   | 63                    | 0.0%                            |
| 8    | D, D  | 274                   | 0.0%                            |
| 9    | W, W  | 810                   | 0.1%                            |
| 10   | W, W  | -306                  | -0.1%                           |
| 11   | W, AN   | -416                  | -0.1%                           |
| 12   | D, D  | 1,396                 | 0.2%                            |
| 13   | W, W  | -129                  | 0.0%                            |
| 14   | D, D  | -675                  | -0.1%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 886                   | 0.1%                            |
| 16             | D, C  | -590                  | -0.1%                           |
| 17             | C, C  | -4,315                | -0.5%                           |
| 18             | C, C  | -1,276                | -0.2%                           |
| 19             | C, C  | 999                   | 0.1%                            |
| 20             | AN, W   | 144                   | 0.0%                            |
| 21             | C, C  | 1,745                 | 0.2%                            |
| 22             | W, W  | 406                   | 0.1%                            |
| 23             | W, W  | 296                   | 0.0%                            |
| 24             | W, W  | -1,612                | -0.2%                           |
| 25             | W, W  | 285                   | 0.0%                            |
| 26             | W, AN   | 103                   | 0.0%                            |
| 27             | AN, AN  | 325                   | 0.0%                            |
| 28             | D, D  | 988                   | 0.1%                            |
| 29             | D, D  | 333                   | 0.0%                            |
| 30             | AN, BN  | 1,218                 | 0.2%                            |
| 31             | BN, D   | 1,007                 | 0.1%                            |
| 32             | AN, W   | 248                   | 0.0%                            |
| 33             | W, W  | 924                   | 0.1%                            |
| 34             | D, C  | -662                  | -0.1%                           |
| 35             | C, C  | 1,112                 | 0.2%                            |
| 36             | D, BN   | 1,506                 | 0.2%                            |
| 37             | BN, AN  | -286                  | 0.0%                            |
| 38             | W, W  | 360                   | 0.1%                            |
| 39             | BN, D   | 37                    | 0.0%                            |
| 40             | D, C  | 1,274                 | 0.2%                            |
| 41             | C, C  | -2,082                | -0.2%                           |
| 42             | C, C  | 2,335                 | 0.3%                            |
| <b>Average</b> |   | <b>147</b>            | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>2,335</b>          | <b>0.3%</b>                     |
| <b>Minimum</b> |   | <b>-4,315</b>         | <b>-0.5%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-70. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 7 (SR7) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 665                   | 0.2%                            |
| 2    | W, W  | 520                   | 0.1%                            |
| 3    | C, C  | 440                   | 0.1%                            |
| 4    | C, C  | -12,615               | -3.0%                           |
| 5    | AN, W   | -1,314                | -0.4%                           |
| 6    | BN, AN  | -1,270                | -0.3%                           |
| 7    | AN, W   | 140                   | 0.0%                            |
| 8    | D, D  | -211                  | -0.1%                           |
| 9    | W, W  | -1,619                | -0.5%                           |
| 10   | W, W  | -623                  | -0.2%                           |
| 11   | W, AN   | -716                  | -0.2%                           |
| 12   | D, D  | 206                   | 0.1%                            |
| 13   | W, W  | 617                   | 0.2%                            |
| 14   | D, D  | 380                   | 0.1%                            |
| 15   | C, C  | -24                   | 0.0%                            |
| 16   | D, C  | -514                  | -0.1%                           |
| 17   | C, C  | -7,892                | -2.2%                           |
| 18   | C, C  | -10,172               | -2.7%                           |
| 19   | C, C  | -2,730                | -0.7%                           |
| 20   | AN, W   | -154                  | 0.0%                            |
| 21   | C, C  | -214                  | -0.1%                           |
| 22   | W, W  | -791                  | -0.2%                           |
| 23   | W, W  | 372                   | 0.1%                            |
| 24   | W, W  | -901                  | -0.2%                           |
| 25   | W, W  | 2,312                 | 0.7%                            |
| 26   | W, AN   | 784                   | 0.2%                            |
| 27   | AN, AN  | 273                   | 0.1%                            |
| 28   | D, D  | -461                  | -0.1%                           |
| 29   | D, D  | -280                  | -0.1%                           |
| 30   | AN, BN  | -690                  | -0.2%                           |
| 31   | BN, D   | 448                   | 0.1%                            |
| 32   | AN, W   | -3,147                | -0.9%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -416                  | -0.1%                           |
| 34             | D, C  | -339                  | -0.1%                           |
| 35             | C, C  | 359                   | 0.1%                            |
| 36             | D, BN   | -482                  | -0.1%                           |
| 37             | BN, AN  | 610                   | 0.2%                            |
| 38             | W, W  | 973                   | 0.3%                            |
| 39             | BN, D   | 171                   | 0.0%                            |
| 40             | D, C  | -795                  | -0.2%                           |
| 41             | C, C  | -12,550               | -3.1%                           |
| 42             | C, C  | 3,015                 | 0.7%                            |
| <b>Average</b> |   | <b>-1,158</b>         | <b>-0.3%</b>                    |
| <b>Maximum</b> |   | <b>3,015</b>          | <b>0.7%</b>                     |
| <b>Minimum</b> |   | <b>-12,615</b>        | <b>-3.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-71. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 8 (SR8) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -60                   | 0.0%                            |
| 2    | W, W  | -151                  | 0.0%                            |
| 3    | C, C  | -470                  | 0.0%                            |
| 4    | C, C  | -55                   | 0.0%                            |
| 5    | AN, W   | 169                   | 0.0%                            |
| 6    | BN, AN  | -94                   | 0.0%                            |
| 7    | AN, W   | 526                   | 0.1%                            |
| 8    | D, D  | -228                  | 0.0%                            |
| 9    | W, W  | 118                   | 0.0%                            |
| 10   | W, W  | 103                   | 0.0%                            |
| 11   | W, AN   | 93                    | 0.0%                            |
| 12   | D, D  | -367                  | 0.0%                            |
| 13   | W, W  | 22                    | 0.0%                            |
| 14   | D, D  | -356                  | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 262                   | 0.0%                            |
| 16             | D, C  | 101                   | 0.0%                            |
| 17             | C, C  | -89                   | 0.0%                            |
| 18             | C, C  | -38                   | 0.0%                            |
| 19             | C, C  | 372                   | 0.0%                            |
| 20             | AN, W   | -62                   | 0.0%                            |
| 21             | C, C  | -1,206                | -0.1%                           |
| 22             | W, W  | -55                   | 0.0%                            |
| 23             | W, W  | 132                   | 0.0%                            |
| 24             | W, W  | -1,180                | -0.1%                           |
| 25             | W, W  | -113                  | 0.0%                            |
| 26             | W, AN   | -26                   | 0.0%                            |
| 27             | AN, AN  | 131                   | 0.0%                            |
| 28             | D, D  | 107                   | 0.0%                            |
| 29             | D, D  | 204                   | 0.0%                            |
| 30             | AN, BN  | 160                   | 0.0%                            |
| 31             | BN, D   | -8                    | 0.0%                            |
| 32             | AN, W   | -487                  | -0.1%                           |
| 33             | W, W  | -708                  | -0.1%                           |
| 34             | D, C  | 332                   | 0.0%                            |
| 35             | C, C  | -295                  | 0.0%                            |
| 36             | D, BN   | -339                  | 0.0%                            |
| 37             | BN, AN  | 17                    | 0.0%                            |
| 38             | W, W  | 32                    | 0.0%                            |
| 39             | BN, D   | 513                   | 0.0%                            |
| 40             | D, C  | 460                   | 0.0%                            |
| 41             | C, C  | 103                   | 0.0%                            |
| 42             | C, C  | -11                   | 0.0%                            |
| <b>Average</b> |   | <b>-58</b>            | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>526</b>            | <b>0.1%</b>                     |
| <b>Minimum</b> |   | <b>-1,206</b>         | <b>-0.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-72. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 9 (SR9) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 331                   | 0.1%                            |
| 2    | W, W  | -1,136                | -0.2%                           |
| 3    | C, C  | 1,105                 | 0.2%                            |
| 4    | C, C  | 303                   | 0.1%                            |
| 5    | AN, W   | 52                    | 0.0%                            |
| 6    | BN, AN  | -62                   | 0.0%                            |
| 7    | AN, W   | -395                  | -0.1%                           |
| 8    | D, D  | 264                   | 0.0%                            |
| 9    | W, W  | 229                   | 0.0%                            |
| 10   | W, W  | -141                  | 0.0%                            |
| 11   | W, AN   | -990                  | -0.2%                           |
| 12   | D, D  | 396                   | 0.1%                            |
| 13   | W, W  | 215                   | 0.0%                            |
| 14   | D, D  | 669                   | 0.1%                            |
| 15   | C, C  | 2,292                 | 0.4%                            |
| 16   | D, C  | 1,549                 | 0.3%                            |
| 17   | C, C  | -963                  | -0.2%                           |
| 18   | C, C  | -1,286                | -0.2%                           |
| 19   | C, C  | -602                  | -0.1%                           |
| 20   | AN, W   | -3,513                | -0.7%                           |
| 21   | C, C  | 2,073                 | 0.4%                            |
| 22   | W, W  | 985                   | 0.2%                            |
| 23   | W, W  | 126                   | 0.0%                            |
| 24   | W, W  | -2,788                | -0.5%                           |
| 25   | W, W  | -5                    | 0.0%                            |
| 26   | W, AN   | -307                  | -0.1%                           |
| 27   | AN, AN  | -587                  | -0.1%                           |
| 28   | D, D  | 581                   | 0.1%                            |
| 29   | D, D  | 427                   | 0.1%                            |
| 30   | AN, BN  | -53                   | 0.0%                            |
| 31   | BN, D   | -1,149                | -0.2%                           |
| 32   | AN, W   | -480                  | -0.1%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -272                  | -0.1%                           |
| 34             | D, C  | -47                   | 0.0%                            |
| 35             | C, C  | 957                   | 0.2%                            |
| 36             | D, BN   | 98                    | 0.0%                            |
| 37             | BN, AN  | 406                   | 0.1%                            |
| 38             | W, W  | -39                   | 0.0%                            |
| 39             | BN, D   | -930                  | -0.2%                           |
| 40             | D, C  | 2,594                 | 0.4%                            |
| 41             | C, C  | 131                   | 0.0%                            |
| 42             | C, C  | -1,099                | -0.2%                           |
| <b>Average</b> |   | <b>-25</b>            | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>2,594</b>          | <b>0.4%</b>                     |
| <b>Minimum</b> |   | <b>-3,513</b>         | <b>-0.7%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-73. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 10 (SR10) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 12,712                | 4.4%                            |
| 2    | W, W  | -13,397               | -3.6%                           |
| 3    | C, C  | 9,454                 | 1.8%                            |
| 4    | C, C  | -100,186              | -12.4%                          |
| 5    | AN, W   | -2,308                | -0.6%                           |
| 6    | BN, AN  | -50                   | 0.0%                            |
| 7    | AN, W   | -1,459                | -0.5%                           |
| 8    | D, D  | 4,451                 | 1.0%                            |
| 9    | W, W  | 638                   | 0.2%                            |
| 10   | W, W  | -93                   | 0.0%                            |
| 11   | W, AN   | -7,658                | -2.5%                           |
| 12   | D, D  | 3,678                 | 0.8%                            |
| 13   | W, W  | 3,947                 | 1.3%                            |
| 14   | D, D  | 9,473                 | 2.1%                            |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 29,332                | 5.6%                            |
| 16             | D, C  | 8,363                 | 1.5%                            |
| 17             | C, C  | -9,523                | -1.5%                           |
| 18             | C, C  | -17,843               | -2.3%                           |
| 19             | C, C  | 585                   | 0.1%                            |
| 20             | AN, W   | -38,156               | -9.1%                           |
| 21             | C, C  | 26,796                | 4.9%                            |
| 22             | W, W  | 9,434                 | 2.8%                            |
| 23             | W, W  | 1,596                 | 0.5%                            |
| 24             | W, W  | -8,282                | -2.7%                           |
| 25             | W, W  | -41                   | 0.0%                            |
| 26             | W, AN   | -2,988                | -1.1%                           |
| 27             | AN, AN  | -6,980                | -1.8%                           |
| 28             | D, D  | 6,237                 | 1.3%                            |
| 29             | D, D  | 10,465                | 2.2%                            |
| 30             | AN, BN  | 37                    | 0.0%                            |
| 31             | BN, D   | -5,765                | -1.2%                           |
| 32             | AN, W   | -5,792                | -1.9%                           |
| 33             | W, W  | -3,516                | -1.2%                           |
| 34             | D, C  | -5,074                | -1.2%                           |
| 35             | C, C  | 13,020                | 2.7%                            |
| 36             | D, BN   | 2,517                 | 0.4%                            |
| 37             | BN, AN  | 6,785                 | 1.6%                            |
| 38             | W, W  | 1,265                 | 0.4%                            |
| 39             | BN, D   | -23,845               | -6.3%                           |
| 40             | D, C  | 22,655                | 5.0%                            |
| 41             | C, C  | -63,994               | -8.3%                           |
| 42             | C, C  | -13,798               | -1.9%                           |
| <b>Average</b> |   | <b>-3,507</b>         | <b>-0.5%</b>                    |
| <b>Maximum</b> |   | <b>29,332</b>         | <b>5.6%</b>                     |
| <b>Minimum</b> |   | <b>-100,186</b>       | <b>-12.4%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-74. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 11 (SR11) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -10                   | 0.0%                            |
| 2    | W, W  | -7                    | 0.0%                            |
| 3    | C, C  | -3,265                | -0.8%                           |
| 4    | C, C  | -285                  | 0.0%                            |
| 5    | AN, W   | -6                    | 0.0%                            |
| 6    | BN, AN  | -6                    | 0.0%                            |
| 7    | AN, W   | 11                    | 0.0%                            |
| 8    | D, D  | -3,280                | -0.9%                           |
| 9    | W, W  | -60                   | 0.0%                            |
| 10   | W, W  | -9                    | 0.0%                            |
| 11   | W, AN   | 22                    | 0.0%                            |
| 12   | D, D  | -17                   | 0.0%                            |
| 13   | W, W  | 32                    | 0.0%                            |
| 14   | D, D  | -26                   | 0.0%                            |
| 15   | C, C  | -43                   | 0.0%                            |
| 16   | D, C  | 26                    | 0.0%                            |
| 17   | C, C  | -140                  | 0.0%                            |
| 18   | C, C  | -134                  | 0.0%                            |
| 19   | C, C  | -352                  | -0.1%                           |
| 20   | AN, W   | -2,294                | -0.7%                           |
| 21   | C, C  | 538                   | 0.1%                            |
| 22   | W, W  | 237                   | 0.1%                            |
| 23   | W, W  | 224                   | 0.1%                            |
| 24   | W, W  | 9,885                 | 3.1%                            |
| 25   | W, W  | 7,619                 | 3.1%                            |
| 26   | W, AN   | -78                   | 0.0%                            |
| 27   | AN, AN  | -5                    | 0.0%                            |
| 28   | D, D  | 50                    | 0.0%                            |
| 29   | D, D  | 124                   | 0.0%                            |
| 30   | AN, BN  | 78                    | 0.0%                            |
| 31   | BN, D   | 49                    | 0.0%                            |
| 32   | AN, W   | 12,310                | 4.6%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 236                   | 0.1%                            |
| 34             | D, C  | -34                   | 0.0%                            |
| 35             | C, C  | -68                   | 0.0%                            |
| 36             | D, BN   | -80                   | 0.0%                            |
| 37             | BN, AN  | -7                    | 0.0%                            |
| 38             | W, W  | 27                    | 0.0%                            |
| 39             | BN, D   | -199                  | -0.1%                           |
| 40             | D, C  | 325                   | 0.1%                            |
| 41             | C, C  | -34                   | 0.0%                            |
| 42             | C, C  | -94                   | 0.0%                            |
| <b>Average</b> |   | <b>506</b>            | <b>0.2%</b>                     |
| <b>Maximum</b> |   | <b>12,310</b>         | <b>4.6%</b>                     |
| <b>Minimum</b> |   | <b>-3,280</b>         | <b>-0.9%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-75. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 12 (SR12) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 30                    | 0.0%                            |
| 2    | W, W  | 30                    | 0.0%                            |
| 3    | C, C  | -15                   | 0.0%                            |
| 4    | C, C  | -304                  | 0.0%                            |
| 5    | AN, W   | 85                    | 0.0%                            |
| 6    | BN, AN  | -38                   | 0.0%                            |
| 7    | AN, W   | 65                    | 0.0%                            |
| 8    | D, D  | 12                    | 0.0%                            |
| 9    | W, W  | 27                    | 0.0%                            |
| 10   | W, W  | -113                  | 0.0%                            |
| 11   | W, AN   | -71                   | 0.0%                            |
| 12   | D, D  | -329                  | -0.1%                           |
| 13   | W, W  | -9                    | 0.0%                            |
| 14   | D, D  | -52                   | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | -57                   | 0.0%                            |
| 16             | D, C  | 212                   | 0.0%                            |
| 17             | C, C  | -284                  | 0.0%                            |
| 18             | C, C  | -177                  | 0.0%                            |
| 19             | C, C  | -111                  | 0.0%                            |
| 20             | AN, W   | -6,931                | -1.1%                           |
| 21             | C, C  | 1,889                 | 0.3%                            |
| 22             | W, W  | 811                   | 0.2%                            |
| 23             | W, W  | -4                    | 0.0%                            |
| 24             | W, W  | -11                   | 0.0%                            |
| 25             | W, W  | 5                     | 0.0%                            |
| 26             | W, AN   | 6                     | 0.0%                            |
| 27             | AN, AN  | 76                    | 0.0%                            |
| 28             | D, D  | -39                   | 0.0%                            |
| 29             | D, D  | -60                   | 0.0%                            |
| 30             | AN, BN  | 136                   | 0.0%                            |
| 31             | BN, D   | 12                    | 0.0%                            |
| 32             | AN, W   | -28                   | 0.0%                            |
| 33             | W, W  | 20                    | 0.0%                            |
| 34             | D, C  | -3                    | 0.0%                            |
| 35             | C, C  | -41                   | 0.0%                            |
| 36             | D, BN   | -155                  | 0.0%                            |
| 37             | BN, AN  | 83                    | 0.0%                            |
| 38             | W, W  | 33                    | 0.0%                            |
| 39             | BN, D   | 42                    | 0.0%                            |
| 40             | D, C  | 32                    | 0.0%                            |
| 41             | C, C  | -471                  | -0.1%                           |
| 42             | C, C  | 307                   | 0.0%                            |
| <b>Average</b> |   | <b>-128</b>           | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>1,889</b>          | <b>0.3%</b>                     |
| <b>Minimum</b> |   | <b>-6,931</b>         | <b>-1.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-76. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 13 (SR13) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -77                   | 0.0%                            |
| 2    | W, W  | -391                  | 0.0%                            |
| 3    | C, C  | -86                   | 0.0%                            |
| 4    | C, C  | -9,602                | -0.4%                           |
| 5    | AN, W   | 354                   | 0.0%                            |
| 6    | BN, AN  | 23                    | 0.0%                            |
| 7    | AN, W   | 137                   | 0.0%                            |
| 8    | D, D  | 2                     | 0.0%                            |
| 9    | W, W  | -58                   | 0.0%                            |
| 10   | W, W  | 151                   | 0.0%                            |
| 11   | W, AN   | 98                    | 0.0%                            |
| 12   | D, D  | -171                  | 0.0%                            |
| 13   | W, W  | -266                  | 0.0%                            |
| 14   | D, D  | -115                  | 0.0%                            |
| 15   | C, C  | 213                   | 0.0%                            |
| 16   | D, C  | -48                   | 0.0%                            |
| 17   | C, C  | -522                  | 0.0%                            |
| 18   | C, C  | -1,883                | -0.1%                           |
| 19   | C, C  | 14                    | 0.0%                            |
| 20   | AN, W   | -189                  | 0.0%                            |
| 21   | C, C  | 314                   | 0.0%                            |
| 22   | W, W  | -134                  | 0.0%                            |
| 23   | W, W  | 379                   | 0.0%                            |
| 24   | W, W  | 94                    | 0.0%                            |
| 25   | W, W  | -72                   | 0.0%                            |
| 26   | W, AN   | -9                    | 0.0%                            |
| 27   | AN, AN  | 57                    | 0.0%                            |
| 28   | D, D  | 383                   | 0.0%                            |
| 29   | D, D  | -617                  | 0.0%                            |
| 30   | AN, BN  | -351                  | 0.0%                            |
| 31   | BN, D   | -735                  | 0.0%                            |
| 32   | AN, W   | -265                  | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -526                  | 0.0%                            |
| 34             | D, C  | 109                   | 0.0%                            |
| 35             | C, C  | -501                  | 0.0%                            |
| 36             | D, BN   | 99                    | 0.0%                            |
| 37             | BN, AN  | -29                   | 0.0%                            |
| 38             | W, W  | 361                   | 0.0%                            |
| 39             | BN, D   | 80                    | 0.0%                            |
| 40             | D, C  | -201                  | 0.0%                            |
| 41             | C, C  | -6,342                | -0.3%                           |
| 42             | C, C  | -712                  | 0.0%                            |
| <b>Average</b> |   | <b>-501</b>           | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>383</b>            | <b>0.0%</b>                     |
| <b>Minimum</b> |   | <b>-9,602</b>         | <b>-0.4%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-77. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 14 (SR14) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -19,986               | -9.2%                           |
| 2    | W, W  | -28,954               | -8.6%                           |
| 3    | C, C  | 30,007                | 4.6%                            |
| 4    | C, C  | 20,040                | 1.6%                            |
| 5    | AN, W   | -2,688                | -0.7%                           |
| 6    | BN, AN  | 9,236                 | 1.9%                            |
| 7    | AN, W   | 720                   | 0.3%                            |
| 8    | D, D  | 22,089                | 4.7%                            |
| 9    | W, W  | 2,958                 | 1.0%                            |
| 10   | W, W  | 9                     | 0.0%                            |
| 11   | W, AN   | -6,812                | -3.5%                           |
| 12   | D, D  | 14,402                | 2.9%                            |
| 13   | W, W  | 7,922                 | 3.1%                            |
| 14   | D, D  | 24,858                | 4.9%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 87,868                | 12.2%                           |
| 16             | D, C  | 25,834                | 3.4%                            |
| 17             | C, C  | -29,547               | -2.7%                           |
| 18             | C, C  | -16,620               | -1.2%                           |
| 19             | C, C  | 304                   | 0.0%                            |
| 20             | AN, W   | -116,644              | -19.0%                          |
| 21             | C, C  | 88,918                | 11.0%                           |
| 22             | W, W  | 18,654                | 5.4%                            |
| 23             | W, W  | 3,765                 | 1.4%                            |
| 24             | W, W  | -43,020               | -16.4%                          |
| 25             | W, W  | -5,176                | -2.4%                           |
| 26             | W, AN   | -7,240                | -3.0%                           |
| 27             | AN, AN  | -21,246               | -3.6%                           |
| 28             | D, D  | 17,903                | 2.4%                            |
| 29             | D, D  | 18,732                | 2.4%                            |
| 30             | AN, BN  | 13,902                | 2.1%                            |
| 31             | BN, D   | 34,570                | 4.8%                            |
| 32             | AN, W   | -22,636               | -6.5%                           |
| 33             | W, W  | -5,194                | -2.4%                           |
| 34             | D, C  | 3,303                 | 0.6%                            |
| 35             | C, C  | 41,262                | 4.8%                            |
| 36             | D, BN   | 17,356                | 1.4%                            |
| 37             | BN, AN  | 19,739                | 2.5%                            |
| 38             | W, W  | 4,417                 | 1.5%                            |
| 39             | BN, D   | -57,854               | -13.2%                          |
| 40             | D, C  | 36,729                | 4.7%                            |
| 41             | C, C  | 36,359                | 3.0%                            |
| 42             | C, C  | -39,625               | -2.9%                           |
| <b>Average</b> |   | <b>4,253</b>          | <b>-0.2%</b>                    |
| <b>Maximum</b> |   | <b>88,918</b>         | <b>12.2%</b>                    |
| <b>Minimum</b> |   | <b>-116,644</b>       | <b>-19.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-78. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 15 (SR15) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 2,698                 | 0.2%                            |
| 2    | W, W  | -3,289                | -0.2%                           |
| 3    | C, C  | -202                  | 0.0%                            |
| 4    | C, C  | -11,430               | -0.6%                           |
| 5    | AN, W   | -3,258                | -0.2%                           |
| 6    | BN, AN  | -61                   | 0.0%                            |
| 7    | AN, W   | -1,809                | -0.1%                           |
| 8    | D, D  | -1,329                | -0.1%                           |
| 9    | W, W  | -5,733                | -0.5%                           |
| 10   | W, W  | -805                  | -0.1%                           |
| 11   | W, AN   | -995                  | -0.1%                           |
| 12   | D, D  | -3,501                | -0.2%                           |
| 13   | W, W  | 1,145                 | 0.1%                            |
| 14   | D, D  | 1,494                 | 0.1%                            |
| 15   | C, C  | 4,350                 | 0.2%                            |
| 16   | D, C  | -518                  | 0.0%                            |
| 17   | C, C  | -2,131                | -0.1%                           |
| 18   | C, C  | -5,200                | -0.3%                           |
| 19   | C, C  | 3,545                 | 0.2%                            |
| 20   | AN, W   | -4,139                | -0.3%                           |
| 21   | C, C  | 1,930                 | 0.1%                            |
| 22   | W, W  | 280                   | 0.0%                            |
| 23   | W, W  | -8,108                | -0.6%                           |
| 24   | W, W  | -3,247                | -0.2%                           |
| 25   | W, W  | -1,271                | -0.1%                           |
| 26   | W, AN   | 2,040                 | 0.1%                            |
| 27   | AN, AN  | -8,584                | -0.6%                           |
| 28   | D, D  | -1,415                | -0.1%                           |
| 29   | D, D  | -1,194                | -0.1%                           |
| 30   | AN, BN  | 1,177                 | 0.1%                            |
| 31   | BN, D   | -10,599               | -0.6%                           |
| 32   | AN, W   | -2,338                | -0.2%                           |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -482                  | 0.0%                            |
| 34             | D, C  | -7,640                | -0.4%                           |
| 35             | C, C  | -116                  | 0.0%                            |
| 36             | D, BN   | -1,035                | -0.1%                           |
| 37             | BN, AN  | -1,213                | -0.1%                           |
| 38             | W, W  | -5,944                | -0.5%                           |
| 39             | BN, D   | -956                  | -0.1%                           |
| 40             | D, C  | 4,379                 | 0.2%                            |
| 41             | C, C  | -5,870                | -0.3%                           |
| 42             | C, C  | -5,384                | -0.3%                           |
| <b>Average</b> |   | <b>-2,066</b>         | <b>-0.1%</b>                    |
| <b>Maximum</b> |   | <b>4,379</b>          | <b>0.2%</b>                     |
| <b>Minimum</b> |   | <b>-11,430</b>        | <b>-0.6%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-79. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 16 (SR16) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 21                    | 0.0%                            |
| 2    | W, W  | -5                    | 0.0%                            |
| 3    | C, C  | -31                   | 0.0%                            |
| 4    | C, C  | 55                    | 0.0%                            |
| 5    | AN, W   | -6                    | 0.0%                            |
| 6    | BN, AN  | -4                    | 0.0%                            |
| 7    | AN, W   | -35                   | -0.1%                           |
| 8    | D, D  | 13                    | 0.0%                            |
| 9    | W, W  | -78                   | -0.1%                           |
| 10   | W, W  | 0                     | 0.0%                            |
| 11   | W, AN   | 8                     | 0.0%                            |
| 12   | D, D  | 6                     | 0.0%                            |
| 13   | W, W  | 101                   | 0.1%                            |
| 14   | D, D  | 25                    | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | -50                   | 0.0%                            |
| 16             | D, C  | -96                   | 0.0%                            |
| 17             | C, C  | 91                    | 0.0%                            |
| 18             | C, C  | 160                   | 0.1%                            |
| 19             | C, C  | -28                   | 0.0%                            |
| 20             | AN, W   | -25                   | 0.0%                            |
| 21             | C, C  | 22                    | 0.0%                            |
| 22             | W, W  | 10                    | 0.0%                            |
| 23             | W, W  | 0                     | 0.0%                            |
| 24             | W, W  | 14                    | 0.0%                            |
| 25             | W, W  | 0                     | 0.0%                            |
| 26             | W, AN   | -7                    | 0.0%                            |
| 27             | AN, AN  | -5                    | 0.0%                            |
| 28             | D, D  | 2                     | 0.0%                            |
| 29             | D, D  | -50                   | 0.0%                            |
| 30             | AN, BN  | 110                   | 0.1%                            |
| 31             | BN, D   | -70                   | -0.1%                           |
| 32             | AN, W   | -34                   | 0.0%                            |
| 33             | W, W  | 39                    | 0.1%                            |
| 34             | D, C  | 68                    | 0.0%                            |
| 35             | C, C  | -77                   | -0.1%                           |
| 36             | D, BN   | 177                   | 0.1%                            |
| 37             | BN, AN  | -32                   | 0.0%                            |
| 38             | W, W  | -7                    | 0.0%                            |
| 39             | BN, D   | 8                     | 0.0%                            |
| 40             | D, C  | -6                    | 0.0%                            |
| 41             | C, C  | 46                    | 0.0%                            |
| 42             | C, C  | -72                   | 0.0%                            |
| <b>Average</b> |   | <b>6</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>177</b>            | <b>0.1%</b>                     |
| <b>Minimum</b> |   | <b>-96</b>            | <b>-0.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-80. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 17 (SR17) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -75                   | 0.0%                            |
| 2    | W, W  | 18                    | 0.0%                            |
| 3    | C, C  | -72                   | 0.0%                            |
| 4    | C, C  | -12                   | 0.0%                            |
| 5    | AN, W   | 2                     | 0.0%                            |
| 6    | BN, AN  | -26                   | 0.0%                            |
| 7    | AN, W   | 16                    | 0.0%                            |
| 8    | D, D  | -30                   | 0.0%                            |
| 9    | W, W  | -19                   | 0.0%                            |
| 10   | W, W  | -1                    | 0.0%                            |
| 11   | W, AN   | -10                   | 0.0%                            |
| 12   | D, D  | -58                   | 0.0%                            |
| 13   | W, W  | -136                  | -0.1%                           |
| 14   | D, D  | -65                   | 0.0%                            |
| 15   | C, C  | 43                    | 0.0%                            |
| 16   | D, C  | 16                    | 0.0%                            |
| 17   | C, C  | -31                   | 0.0%                            |
| 18   | C, C  | 47                    | 0.0%                            |
| 19   | C, C  | 23                    | 0.0%                            |
| 20   | AN, W   | -38                   | 0.0%                            |
| 21   | C, C  | -94                   | 0.0%                            |
| 22   | W, W  | 0                     | 0.0%                            |
| 23   | W, W  | -53                   | 0.0%                            |
| 24   | W, W  | 36                    | 0.0%                            |
| 25   | W, W  | -57                   | 0.0%                            |
| 26   | W, AN   | 69                    | 0.0%                            |
| 27   | AN, AN  | -57                   | 0.0%                            |
| 28   | D, D  | -50                   | 0.0%                            |
| 29   | D, D  | -56                   | 0.0%                            |
| 30   | AN, BN  | 4                     | 0.0%                            |
| 31   | BN, D   | 147                   | 0.0%                            |
| 32   | AN, W   | 86                    | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 1                     | 0.0%                            |
| 34             | D, C  | -34                   | 0.0%                            |
| 35             | C, C  | -52                   | 0.0%                            |
| 36             | D, BN   | 78                    | 0.0%                            |
| 37             | BN, AN  | 153                   | 0.0%                            |
| 38             | W, W  | -7                    | 0.0%                            |
| 39             | BN, D   | 10                    | 0.0%                            |
| 40             | D, C  | -13                   | 0.0%                            |
| 41             | C, C  | 9                     | 0.0%                            |
| 42             | C, C  | 70                    | 0.0%                            |
| <b>Average</b> |   | <b>-5</b>             | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>153</b>            | <b>0.0%</b>                     |
| <b>Minimum</b> |   | <b>-136</b>           | <b>-0.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-81. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 18 (SR18) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -168                  | 0.0%                            |
| 2    | W, W  | 172                   | 0.0%                            |
| 3    | C, C  | 12                    | 0.0%                            |
| 4    | C, C  | -3                    | 0.0%                            |
| 5    | AN, W   | 120                   | 0.0%                            |
| 6    | BN, AN  | 86                    | 0.0%                            |
| 7    | AN, W   | -57                   | 0.0%                            |
| 8    | D, D  | -123                  | 0.0%                            |
| 9    | W, W  | -59                   | 0.0%                            |
| 10   | W, W  | -22                   | 0.0%                            |
| 11   | W, AN   | -149                  | 0.0%                            |
| 12   | D, D  | -133                  | 0.0%                            |
| 13   | W, W  | -16                   | 0.0%                            |
| 14   | D, D  | 88                    | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | -72                   | 0.0%                            |
| 16             | D, C  | 414                   | 0.0%                            |
| 17             | C, C  | -157                  | 0.0%                            |
| 18             | C, C  | 269                   | 0.0%                            |
| 19             | C, C  | 61                    | 0.0%                            |
| 20             | AN, W   | -442                  | 0.0%                            |
| 21             | C, C  | -72                   | 0.0%                            |
| 22             | W, W  | -45                   | 0.0%                            |
| 23             | W, W  | 113                   | 0.0%                            |
| 24             | W, W  | -2                    | 0.0%                            |
| 25             | W, W  | -68                   | 0.0%                            |
| 26             | W, AN   | -98                   | 0.0%                            |
| 27             | AN, AN  | -146                  | 0.0%                            |
| 28             | D, D  | -40                   | 0.0%                            |
| 29             | D, D  | 74                    | 0.0%                            |
| 30             | AN, BN  | -128                  | 0.0%                            |
| 31             | BN, D   | -185                  | 0.0%                            |
| 32             | AN, W   | 42                    | 0.0%                            |
| 33             | W, W  | -303                  | 0.0%                            |
| 34             | D, C  | 358                   | 0.0%                            |
| 35             | C, C  | -178                  | 0.0%                            |
| 36             | D, BN   | 14                    | 0.0%                            |
| 37             | BN, AN  | -67                   | 0.0%                            |
| 38             | W, W  | -78                   | 0.0%                            |
| 39             | BN, D   | -115                  | 0.0%                            |
| 40             | D, C  | 46                    | 0.0%                            |
| 41             | C, C  | 207                   | 0.0%                            |
| 42             | C, C  | -6                    | 0.0%                            |
| <b>Average</b> |   | <b>-20</b>            | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>414</b>            | <b>0.0%</b>                     |
| <b>Minimum</b> |   | <b>-442</b>           | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-82. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 19 (SR19) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 0                     | 0.0%                            |
| 2    | W, W  | 0                     | 0.0%                            |
| 3    | C, C  | 0                     | 0.0%                            |
| 4    | C, C  | -1                    | 0.0%                            |
| 5    | AN, W   | 0                     | 0.0%                            |
| 6    | BN, AN  | -4                    | 0.0%                            |
| 7    | AN, W   | 22                    | 0.0%                            |
| 8    | D, D  | 0                     | 0.0%                            |
| 9    | W, W  | 0                     | 0.0%                            |
| 10   | W, W  | 0                     | 0.0%                            |
| 11   | W, AN   | 74                    | 0.0%                            |
| 12   | D, D  | -5                    | 0.0%                            |
| 13   | W, W  | -24                   | 0.0%                            |
| 14   | D, D  | 21                    | 0.0%                            |
| 15   | C, C  | 44                    | 0.0%                            |
| 16   | D, C  | -36                   | 0.0%                            |
| 17   | C, C  | -35                   | 0.0%                            |
| 18   | C, C  | 37                    | 0.0%                            |
| 19   | C, C  | -5                    | 0.0%                            |
| 20   | AN, W   | 0                     | 0.0%                            |
| 21   | C, C  | 0                     | 0.0%                            |
| 22   | W, W  | 0                     | 0.0%                            |
| 23   | W, W  | 30                    | 0.0%                            |
| 24   | W, W  | 176                   | 0.1%                            |
| 25   | W, W  | -18                   | 0.0%                            |
| 26   | W, AN   | -71                   | 0.0%                            |
| 27   | AN, AN  | 16                    | 0.0%                            |
| 28   | D, D  | 10                    | 0.0%                            |
| 29   | D, D  | 10                    | 0.0%                            |
| 30   | AN, BN  | 0                     | 0.0%                            |
| 31   | BN, D   | -11                   | 0.0%                            |
| 32   | AN, W   | -7                    | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 0                     | 0.0%                            |
| 34             | D, C  | -12                   | 0.0%                            |
| 35             | C, C  | 0                     | 0.0%                            |
| 36             | D, BN   | -2                    | 0.0%                            |
| 37             | BN, AN  | -22                   | 0.0%                            |
| 38             | W, W  | -7                    | 0.0%                            |
| 39             | BN, D   | 0                     | 0.0%                            |
| 40             | D, C  | 0                     | 0.0%                            |
| 41             | C, C  | 0                     | 0.0%                            |
| 42             | C, C  | 0                     | 0.0%                            |
| <b>Average</b> |   | <b>4</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>176</b>            | <b>0.1%</b>                     |
| <b>Minimum</b> |   | <b>-71</b>            | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-83. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 20 (SR20) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 0                     | 0.0%                            |
| 2    | W, W  | 0                     | 0.0%                            |
| 3    | C, C  | -8                    | 0.0%                            |
| 4    | C, C  | 0                     | 0.0%                            |
| 5    | AN, W   | 0                     | 0.0%                            |
| 6    | BN, AN  | 0                     | 0.0%                            |
| 7    | AN, W   | 0                     | 0.0%                            |
| 8    | D, D  | 0                     | 0.0%                            |
| 9    | W, W  | -45                   | 0.0%                            |
| 10   | W, W  | 0                     | 0.0%                            |
| 11   | W, AN   | 0                     | 0.0%                            |
| 12   | D, D  | 0                     | 0.0%                            |
| 13   | W, W  | 0                     | 0.0%                            |
| 14   | D, D  | -100                  | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 50                    | 0.0%                            |
| 16             | D, C  | 5                     | 0.0%                            |
| 17             | C, C  | 38                    | 0.0%                            |
| 18             | C, C  | -2                    | 0.0%                            |
| 19             | C, C  | 113                   | 0.0%                            |
| 20             | AN, W   | -35                   | 0.0%                            |
| 21             | C, C  | -6                    | 0.0%                            |
| 22             | W, W  | -6                    | 0.0%                            |
| 23             | W, W  | -2                    | 0.0%                            |
| 24             | W, W  | 12                    | 0.0%                            |
| 25             | W, W  | -12                   | 0.0%                            |
| 26             | W, AN   | -56                   | 0.0%                            |
| 27             | AN, AN  | 0                     | 0.0%                            |
| 28             | D, D  | 0                     | 0.0%                            |
| 29             | D, D  | 0                     | 0.0%                            |
| 30             | AN, BN  | 0                     | 0.0%                            |
| 31             | BN, D   | 23                    | 0.0%                            |
| 32             | AN, W   | 46                    | 0.0%                            |
| 33             | W, W  | -55                   | 0.0%                            |
| 34             | D, C  | 0                     | 0.0%                            |
| 35             | C, C  | 20                    | 0.0%                            |
| 36             | D, BN   | 1                     | 0.0%                            |
| 37             | BN, AN  | 16                    | 0.0%                            |
| 38             | W, W  | 2                     | 0.0%                            |
| 39             | BN, D   | 1                     | 0.0%                            |
| 40             | D, C  |                       | 0.0%                            |
| 41             | C, C  | 14                    | 0.0%                            |
| 42             | C, C  | -4                    | 0.0%                            |
| <b>Average</b> |   | <b>0</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>113</b>            | <b>0.0%</b>                     |
| <b>Minimum</b> |   | <b>-100</b>           | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-84. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 21 (SR21) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 40                    | 0.0%                            |
| 2    | W, W  | -49                   | 0.0%                            |
| 3    | C, C  | -122                  | 0.0%                            |
| 4    | C, C  | -19                   | 0.0%                            |
| 5    | AN, W   | 199                   | 0.0%                            |
| 6    | BN, AN  | -203                  | 0.0%                            |
| 7    | AN, W   | -106                  | 0.0%                            |
| 8    | D, D  | 17                    | 0.0%                            |
| 9    | W, W  | 18                    | 0.0%                            |
| 10   | W, W  | -51                   | 0.0%                            |
| 11   | W, AN   | 10                    | 0.0%                            |
| 12   | D, D  | -23                   | 0.0%                            |
| 13   | W, W  | -11                   | 0.0%                            |
| 14   | D, D  | -1                    | 0.0%                            |
| 15   | C, C  | 210                   | 0.0%                            |
| 16   | D, C  | 116                   | 0.0%                            |
| 17   | C, C  | -68                   | 0.0%                            |
| 18   | C, C  | 28                    | 0.0%                            |
| 19   | C, C  | 17                    | 0.0%                            |
| 20   | AN, W   | 74                    | 0.0%                            |
| 21   | C, C  | -115                  | 0.0%                            |
| 22   | W, W  | 40                    | 0.0%                            |
| 23   | W, W  | -24                   | 0.0%                            |
| 24   | W, W  | 34                    | 0.0%                            |
| 25   | W, W  | 16                    | 0.0%                            |
| 26   | W, AN   | 66                    | 0.0%                            |
| 27   | AN, AN  | 95                    | 0.0%                            |
| 28   | D, D  | -9                    | 0.0%                            |
| 29   | D, D  | 9                     | 0.0%                            |
| 30   | AN, BN  | 19                    | 0.0%                            |
| 31   | BN, D   | -57                   | 0.0%                            |
| 32   | AN, W   | -21                   | 0.0%                            |
| 33   | W, W  | 42                    | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 34             | D, C  | 0                     | 0.0%                            |
| 35             | C, C  | 42                    | 0.0%                            |
| 36             | D, BN   | 32                    | 0.0%                            |
| 37             | BN, AN  | 82                    | 0.0%                            |
| 38             | W, W  | -38                   | 0.0%                            |
| 39             | BN, D   | -83                   | 0.0%                            |
| 40             | D, C  | -8                    | 0.0%                            |
| 41             | C, C  | -33                   | 0.0%                            |
| 42             | C, C  | 14                    | 0.0%                            |
| <b>Average</b> |   | <b>4</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>210</b>            | <b>0.0%</b>                     |
| <b>Minimum</b> |   | <b>-203</b>           | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

### I-1.1.5 Changes in Groundwater Pumping, Alternative 2 without TUCP Delta VA Compared to No Action Alternative

Table I.1-85 through Table I.1-105 provide the annual simulated groundwater pumping through the model simulation period for each of the 21 model subregions for Alternative 2 without TUCP Delta VA compared to the No Action Alternative.

Table I.1-85. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 1 (SR1) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 66                    | 0.1%                            |
| 2    | W, W  | -26                   | 0.0%                            |
| 3    | C, C  | 1,020                 | 1.7%                            |
| 4    | C, C  | 6,491                 | 8.5%                            |
| 5    | AN, W   | 104                   | 0.2%                            |
| 6    | BN, AN  | -126                  | -0.2%                           |
| 7    | AN, W   | 5                     | 0.0%                            |
| 8    | D, D  | 99                    | 0.2%                            |
| 9    | W, W  | -96                   | -0.2%                           |
| 10   | W, W  | 14                    | 0.0%                            |
| 11   | W, AN   | 18                    | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 12             | D, D  | 614                   | 1.0%                            |
| 13             | W, W  | -31                   | -0.1%                           |
| 14             | D, D  | 1,854                 | 2.6%                            |
| 15             | C, C  | 2,639                 | 3.5%                            |
| 16             | D, C  | 248                   | 0.4%                            |
| 17             | C, C  | -2,612                | -3.7%                           |
| 18             | C, C  | 4,533                 | 5.5%                            |
| 19             | C, C  | 2,233                 | 2.6%                            |
| 20             | AN, W   | 343                   | 0.6%                            |
| 21             | C, C  | 3,382                 | 4.7%                            |
| 22             | W, W  | 1,094                 | 1.7%                            |
| 23             | W, W  | -61                   | -0.1%                           |
| 24             | W, W  | 44                    | 0.1%                            |
| 25             | W, W  | -22                   | 0.0%                            |
| 26             | W, AN   | -63                   | -0.1%                           |
| 27             | AN, AN  | -78                   | -0.1%                           |
| 28             | D, D  | 137                   | 0.2%                            |
| 29             | D, D  | -81                   | -0.1%                           |
| 30             | AN, BN  | -26                   | 0.0%                            |
| 31             | BN, D   | 50                    | 0.1%                            |
| 32             | AN, W   | -44                   | -0.1%                           |
| 33             | W, W  | -60                   | -0.1%                           |
| 34             | D, C  | 85                    | 0.1%                            |
| 35             | C, C  | 2,864                 | 4.1%                            |
| 36             | D, BN   | 1,759                 | 2.6%                            |
| 37             | BN, AN  | 156                   | 0.3%                            |
| 38             | W, W  | -35                   | -0.1%                           |
| 39             | BN, D   | -72                   | -0.1%                           |
| 40             | D, C  | 3,444                 | 4.9%                            |
| 41             | C, C  | 6,918                 | 8.1%                            |
| 42             | C, C  | -88                   | -0.1%                           |
| <b>Average</b> |   | <b>874</b>            | <b>1.2%</b>                     |
| <b>Maximum</b> |   | <b>6,918</b>          | <b>8.5%</b>                     |
| <b>Minimum</b> |   | <b>-2,612</b>         | <b>-3.7%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-86. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 2 (SR2) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 76                    | 0.0%                            |
| 2    | W, W  | 93                    | 0.0%                            |
| 3    | C, C  | 3,066                 | 0.6%                            |
| 4    | C, C  | 4,728                 | 0.7%                            |
| 5    | AN, W   | 730                   | 0.1%                            |
| 6    | BN, AN  | 679                   | 0.1%                            |
| 7    | AN, W   | 23                    | 0.0%                            |
| 8    | D, D  | 1,628                 | 0.3%                            |
| 9    | W, W  | 222                   | 0.0%                            |
| 10   | W, W  | -167                  | 0.0%                            |
| 11   | W, AN   | -82                   | 0.0%                            |
| 12   | D, D  | 2,965                 | 0.5%                            |
| 13   | W, W  | 834                   | 0.2%                            |
| 14   | D, D  | 4,305                 | 0.7%                            |
| 15   | C, C  | 7,749                 | 1.3%                            |
| 16   | D, C  | -1,661                | -0.3%                           |
| 17   | C, C  | -2,962                | -0.6%                           |
| 18   | C, C  | 4,454                 | 0.7%                            |
| 19   | C, C  | 732                   | 0.1%                            |
| 20   | AN, W   | -73                   | 0.0%                            |
| 21   | C, C  | 9,358                 | 1.7%                            |
| 22   | W, W  | 2,690                 | 0.5%                            |
| 23   | W, W  | -53                   | 0.0%                            |
| 24   | W, W  | -131                  | 0.0%                            |
| 25   | W, W  | -142                  | 0.0%                            |
| 26   | W, AN   | 41                    | 0.0%                            |
| 27   | AN, AN  | -81                   | 0.0%                            |
| 28   | D, D  | 1,250                 | 0.2%                            |
| 29   | D, D  | 60                    | 0.0%                            |
| 30   | AN, BN  | -116                  | 0.0%                            |
| 31   | BN, D   | -892                  | -0.2%                           |
| 32   | AN, W   | -62                   | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -44                   | 0.0%                            |
| 34             | D, C  | 209                   | 0.0%                            |
| 35             | C, C  | 6,229                 | 1.1%                            |
| 36             | D, BN   | 4,051                 | 0.7%                            |
| 37             | BN, AN  | 516                   | 0.1%                            |
| 38             | W, W  | -49                   | 0.0%                            |
| 39             | BN, D   | -59                   | 0.0%                            |
| 40             | D, C  | 7,086                 | 1.1%                            |
| 41             | C, C  | 5,854                 | 0.9%                            |
| 42             | C, C  | 5,208                 | 0.8%                            |
| <b>Average</b> |   | <b>1,625</b>          | <b>0.3%</b>                     |
| <b>Maximum</b> |   | <b>9,358</b>          | <b>1.7%</b>                     |
| <b>Minimum</b> |   | <b>-2,962</b>         | <b>-0.6%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-87. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 3 (SR3) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -3,157                | -1.1%                           |
| 2    | W, W  | -1,930                | -0.6%                           |
| 3    | C, C  | 14,425                | 3.2%                            |
| 4    | C, C  | 73,485                | 12.8%                           |
| 5    | AN, W   | 2,080                 | 0.6%                            |
| 6    | BN, AN  | 1,416                 | 0.4%                            |
| 7    | AN, W   | -2,437                | -0.8%                           |
| 8    | D, D  | -3,006                | -0.8%                           |
| 9    | W, W  | -2,180                | -0.9%                           |
| 10   | W, W  | -2,731                | -1.1%                           |
| 11   | W, AN   | -2,885                | -0.9%                           |
| 12   | D, D  | 12,785                | 3.2%                            |
| 13   | W, W  | 6,202                 | 1.8%                            |
| 14   | D, D  | 21,387                | 5.1%                            |
| 15   | C, C  | 37,494                | 8.4%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 16             | D, C  | -13,465               | -3.3%                           |
| 17             | C, C  | -32,257               | -6.8%                           |
| 18             | C, C  | 80,279                | 15.1%                           |
| 19             | C, C  | -4,699                | -0.8%                           |
| 20             | AN, W   | -2,725                | -0.8%                           |
| 21             | C, C  | 46,484                | 11.6%                           |
| 22             | W, W  | 9,051                 | 2.8%                            |
| 23             | W, W  | -3,027                | -1.0%                           |
| 24             | W, W  | -3,164                | -1.0%                           |
| 25             | W, W  | -3,090                | -1.4%                           |
| 26             | W, AN   | -2,577                | -0.9%                           |
| 27             | AN, AN  | -2,904                | -1.0%                           |
| 28             | D, D  | 4,151                 | 1.1%                            |
| 29             | D, D  | -4,522                | -1.3%                           |
| 30             | AN, BN  | -3,535                | -1.2%                           |
| 31             | BN, D   | -15,712               | -4.6%                           |
| 32             | AN, W   | -3,845                | -1.4%                           |
| 33             | W, W  | -3,149                | -1.1%                           |
| 34             | D, C  | 121                   | 0.0%                            |
| 35             | C, C  | 31,123                | 7.6%                            |
| 36             | D, BN   | 18,249                | 4.1%                            |
| 37             | BN, AN  | 659                   | 0.2%                            |
| 38             | W, W  | -3,238                | -1.2%                           |
| 39             | BN, D   | -3,704                | -1.1%                           |
| 40             | D, C  | 34,009                | 8.3%                            |
| 41             | C, C  | 84,804                | 14.6%                           |
| 42             | C, C  | 4,681                 | 0.8%                            |
| <b>Average</b> |   | <b>8,546</b>          | <b>1.6%</b>                     |
| <b>Maximum</b> |   | <b>84,804</b>         | <b>15.1%</b>                    |
| <b>Minimum</b> |   | <b>-32,257</b>        | <b>-6.8%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-88. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 4 (SR4) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -8,647                | -2.6%                           |
| 2    | W, W  | -8,692                | -2.5%                           |
| 3    | C, C  | -9,192                | -2.5%                           |
| 4    | C, C  | 31,848                | 8.5%                            |
| 5    | AN, W   | -7,170                | -2.1%                           |
| 6    | BN, AN  | -7,518                | -2.2%                           |
| 7    | AN, W   | -12,714               | -3.9%                           |
| 8    | D, D  | -9,764                | -2.8%                           |
| 9    | W, W  | 1,852                 | 0.6%                            |
| 10   | W, W  | -9,775                | -3.1%                           |
| 11   | W, AN   | -8,853                | -2.6%                           |
| 12   | D, D  | -9,897                | -2.8%                           |
| 13   | W, W  | -8,452                | -2.5%                           |
| 14   | D, D  | -9,172                | -2.5%                           |
| 15   | C, C  | -8,577                | -2.5%                           |
| 16   | D, C  | -10,877               | -3.1%                           |
| 17   | C, C  | -14,444               | -4.5%                           |
| 18   | C, C  | 30,399                | 9.2%                            |
| 19   | C, C  | -9,455                | -2.7%                           |
| 20   | AN, W   | -11,375               | -3.5%                           |
| 21   | C, C  | -10,545               | -3.1%                           |
| 22   | W, W  | -8,882                | -2.7%                           |
| 23   | W, W  | -9,192                | -2.7%                           |
| 24   | W, W  | -9,026                | -2.8%                           |
| 25   | W, W  | -8,587                | -2.7%                           |
| 26   | W, AN   | -8,720                | -2.7%                           |
| 27   | AN, AN  | -6,575                | -2.0%                           |
| 28   | D, D  | -9,728                | -2.9%                           |
| 29   | D, D  | -10,350               | -3.1%                           |
| 30   | AN, BN  | -8,399                | -2.5%                           |
| 31   | BN, D   | -10,136               | -3.0%                           |
| 32   | AN, W   | -8,749                | -2.7%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -9,752                | -3.0%                           |
| 34             | D, C  | -10,871               | -3.0%                           |
| 35             | C, C  | -10,833               | -3.2%                           |
| 36             | D, BN   | -10,769               | -2.9%                           |
| 37             | BN, AN  | -8,994                | -2.8%                           |
| 38             | W, W  | -8,444                | -2.6%                           |
| 39             | BN, D   | -8,895                | -2.6%                           |
| 40             | D, C  | -9,071                | -2.5%                           |
| 41             | C, C  | 35,630                | 9.4%                            |
| 42             | C, C  | -5,011                | -1.4%                           |
| <b>Average</b> |   | <b>-6,104</b>         | <b>-1.9%</b>                    |
| <b>Maximum</b> |   | <b>35,630</b>         | <b>9.4%</b>                     |
| <b>Minimum</b> |   | <b>-14,444</b>        | <b>-4.5%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-89. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 5 (SR5) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -21                   | 0.0%                            |
| 2    | W, W  | -328                  | -0.1%                           |
| 3    | C, C  | 918                   | 0.2%                            |
| 4    | C, C  | 3,804                 | 0.7%                            |
| 5    | AN, W   | -2,536                | -0.5%                           |
| 6    | BN, AN  | -1,309                | -0.3%                           |
| 7    | AN, W   | -277                  | -0.1%                           |
| 8    | D, D  | 851                   | 0.2%                            |
| 9    | W, W  | -114                  | 0.0%                            |
| 10   | W, W  | -620                  | -0.2%                           |
| 11   | W, AN   | -405                  | -0.1%                           |
| 12   | D, D  | 344                   | 0.1%                            |
| 13   | W, W  | -557                  | -0.1%                           |
| 14   | D, D  | 1,520                 | 0.3%                            |
| 15   | C, C  | 1,985                 | 0.4%                            |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 16             | D, C  | -11,847               | -2.6%                           |
| 17             | C, C  | 48                    | 0.0%                            |
| 18             | C, C  | 2,915                 | 0.6%                            |
| 19             | C, C  | 4,619                 | 0.9%                            |
| 20             | AN, W   | -540                  | -0.1%                           |
| 21             | C, C  | 3,186                 | 0.7%                            |
| 22             | W, W  | 484                   | 0.1%                            |
| 23             | W, W  | -1,329                | -0.3%                           |
| 24             | W, W  | -430                  | -0.1%                           |
| 25             | W, W  | -241                  | -0.1%                           |
| 26             | W, AN   | 302                   | 0.1%                            |
| 27             | AN, AN  | -416                  | -0.1%                           |
| 28             | D, D  | 276                   | 0.1%                            |
| 29             | D, D  | -381                  | -0.1%                           |
| 30             | AN, BN  | -501                  | -0.1%                           |
| 31             | BN, D   | -346                  | -0.1%                           |
| 32             | AN, W   | -224                  | -0.1%                           |
| 33             | W, W  | -947                  | -0.2%                           |
| 34             | D, C  | 338                   | 0.1%                            |
| 35             | C, C  | 2,312                 | 0.5%                            |
| 36             | D, BN   | 952                   | 0.2%                            |
| 37             | BN, AN  | -286                  | -0.1%                           |
| 38             | W, W  | -457                  | -0.1%                           |
| 39             | BN, D   | -327                  | -0.1%                           |
| 40             | D, C  | 2,626                 | 0.5%                            |
| 41             | C, C  | 319                   | 0.1%                            |
| 42             | C, C  | 12,569                | 2.1%                            |
| <b>Average</b> |   | <b>379</b>            | <b>0.1%</b>                     |
| <b>Maximum</b> |   | <b>12,569</b>         | <b>2.1%</b>                     |
| <b>Minimum</b> |   | <b>-11,847</b>        | <b>-2.6%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-90. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 6 (SR6) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -1,746                | -0.3%                           |
| 2    | W, W  | -682                  | -0.1%                           |
| 3    | C, C  | -1,832                | -0.2%                           |
| 4    | C, C  | -1,331                | -0.1%                           |
| 5    | AN, W   | -1,536                | -0.2%                           |
| 6    | BN, AN  | -2,649                | -0.4%                           |
| 7    | AN, W   | -1,510                | -0.2%                           |
| 8    | D, D  | -2,480                | -0.3%                           |
| 9    | W, W  | -310                  | -0.1%                           |
| 10   | W, W  | -1,838                | -0.3%                           |
| 11   | W, AN   | -1,730                | -0.2%                           |
| 12   | D, D  | -187                  | 0.0%                            |
| 13   | W, W  | -1,574                | -0.2%                           |
| 14   | D, D  | -4,201                | -0.6%                           |
| 15   | C, C  | -419                  | -0.1%                           |
| 16   | D, C  | -5,330                | -0.6%                           |
| 17   | C, C  | -6,734                | -0.8%                           |
| 18   | C, C  | -2,920                | -0.3%                           |
| 19   | C, C  | -546                  | -0.1%                           |
| 20   | AN, W   | -1,800                | -0.3%                           |
| 21   | C, C  | -2,488                | -0.3%                           |
| 22   | W, W  | -1,668                | -0.2%                           |
| 23   | W, W  | -1,466                | -0.2%                           |
| 24   | W, W  | -2,344                | -0.3%                           |
| 25   | W, W  | -1,477                | -0.2%                           |
| 26   | W, AN   | -3,343                | -0.5%                           |
| 27   | AN, AN  | -2,226                | -0.3%                           |
| 28   | D, D  | -2,255                | -0.3%                           |
| 29   | D, D  | -3,205                | -0.5%                           |
| 30   | AN, BN  | -3,888                | -0.6%                           |
| 31   | BN, D   | -953                  | -0.1%                           |
| 32   | AN, W   | -1,345                | -0.2%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -1,692                | -0.3%                           |
| 34             | D, C  | -2,732                | -0.4%                           |
| 35             | C, C  | -1,924                | -0.3%                           |
| 36             | D, BN   | -17,913               | -2.2%                           |
| 37             | BN, AN  | -1,269                | -0.2%                           |
| 38             | W, W  | -2,418                | -0.4%                           |
| 39             | BN, D   | -4,790                | -0.6%                           |
| 40             | D, C  | -5,008                | -0.6%                           |
| 41             | C, C  | -2,872                | -0.3%                           |
| 42             | C, C  | -1,902                | -0.2%                           |
| <b>Average</b> |   | <b>-2,632</b>         | <b>-0.4%</b>                    |
| <b>Maximum</b> |   | <b>-187</b>           | <b>0.0%</b>                     |
| <b>Minimum</b> |   | <b>-17,913</b>        | <b>-2.2%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-91. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 7 (SR7) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 703                   | 0.2%                            |
| 2    | W, W  | 206                   | 0.1%                            |
| 3    | C, C  | -178                  | 0.0%                            |
| 4    | C, C  | -12,398               | -2.9%                           |
| 5    | AN, W   | -885                  | -0.2%                           |
| 6    | BN, AN  | 1,422                 | 0.4%                            |
| 7    | AN, W   | 944                   | 0.3%                            |
| 8    | D, D  | -654                  | -0.2%                           |
| 9    | W, W  | -1,093                | -0.3%                           |
| 10   | W, W  | -822                  | -0.3%                           |
| 11   | W, AN   | -800                  | -0.2%                           |
| 12   | D, D  | 376                   | 0.1%                            |
| 13   | W, W  | 1,066                 | 0.3%                            |
| 14   | D, D  | -307                  | -0.1%                           |
| 15   | C, C  | -140                  | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 16             | D, C  | -36                   | 0.0%                            |
| 17             | C, C  | -6,897                | -1.9%                           |
| 18             | C, C  | -10,051               | -2.6%                           |
| 19             | C, C  | -2,718                | -0.7%                           |
| 20             | AN, W   | -128                  | 0.0%                            |
| 21             | C, C  | -547                  | -0.1%                           |
| 22             | W, W  | -146                  | 0.0%                            |
| 23             | W, W  | -123                  | 0.0%                            |
| 24             | W, W  | -549                  | -0.1%                           |
| 25             | W, W  | 2,440                 | 0.7%                            |
| 26             | W, AN   | 419                   | 0.1%                            |
| 27             | AN, AN  | 10                    | 0.0%                            |
| 28             | D, D  | -435                  | -0.1%                           |
| 29             | D, D  | -224                  | -0.1%                           |
| 30             | AN, BN  | -86                   | 0.0%                            |
| 31             | BN, D   | 21                    | 0.0%                            |
| 32             | AN, W   | -3,104                | -0.8%                           |
| 33             | W, W  | 722                   | 0.2%                            |
| 34             | D, C  | -150                  | 0.0%                            |
| 35             | C, C  | 224                   | 0.1%                            |
| 36             | D, BN   | -946                  | -0.2%                           |
| 37             | BN, AN  | 1,020                 | 0.3%                            |
| 38             | W, W  | -240                  | -0.1%                           |
| 39             | BN, D   | 231                   | 0.1%                            |
| 40             | D, C  | -161                  | 0.0%                            |
| 41             | C, C  | -12,764               | -3.1%                           |
| 42             | C, C  | 3,021                 | 0.7%                            |
| <b>Average</b> |   | <b>-1,042</b>         | <b>-0.3%</b>                    |
| <b>Maximum</b> |   | <b>3,021</b>          | <b>0.7%</b>                     |
| <b>Minimum</b> |   | <b>-12,764</b>        | <b>-3.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-92. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 8 (SR8) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -304                  | 0.0%                            |
| 2    | W, W  | 13                    | 0.0%                            |
| 3    | C, C  | -424                  | 0.0%                            |
| 4    | C, C  | -372                  | 0.0%                            |
| 5    | AN, W   | -20                   | 0.0%                            |
| 6    | BN, AN  | -1,010                | -0.1%                           |
| 7    | AN, W   | -189                  | 0.0%                            |
| 8    | D, D  | 15                    | 0.0%                            |
| 9    | W, W  | 88                    | 0.0%                            |
| 10   | W, W  | -298                  | 0.0%                            |
| 11   | W, AN   | 58                    | 0.0%                            |
| 12   | D, D  | 238                   | 0.0%                            |
| 13   | W, W  | -40                   | 0.0%                            |
| 14   | D, D  | -188                  | 0.0%                            |
| 15   | C, C  | -132                  | 0.0%                            |
| 16   | D, C  | 149                   | 0.0%                            |
| 17   | C, C  | -166                  | 0.0%                            |
| 18   | C, C  | 11                    | 0.0%                            |
| 19   | C, C  | -97                   | 0.0%                            |
| 20   | AN, W   | 51                    | 0.0%                            |
| 21   | C, C  | -1,083                | -0.1%                           |
| 22   | W, W  | 146                   | 0.0%                            |
| 23   | W, W  | -165                  | 0.0%                            |
| 24   | W, W  | -1,442                | -0.2%                           |
| 25   | W, W  | 199                   | 0.0%                            |
| 26   | W, AN   | -728                  | -0.1%                           |
| 27   | AN, AN  | 33                    | 0.0%                            |
| 28   | D, D  | -134                  | 0.0%                            |
| 29   | D, D  | 538                   | 0.1%                            |
| 30   | AN, BN  | -37                   | 0.0%                            |
| 31   | BN, D   | 229                   | 0.0%                            |
| 32   | AN, W   | -287                  | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -704                  | -0.1%                           |
| 34             | D, C  | 281                   | 0.0%                            |
| 35             | C, C  | -234                  | 0.0%                            |
| 36             | D, BN   | 38                    | 0.0%                            |
| 37             | BN, AN  | -118                  | 0.0%                            |
| 38             | W, W  | 246                   | 0.0%                            |
| 39             | BN, D   | 618                   | 0.1%                            |
| 40             | D, C  | 296                   | 0.0%                            |
| 41             | C, C  | -53                   | 0.0%                            |
| 42             | C, C  | -242                  | 0.0%                            |
| <b>Average</b> |   | <b>-124</b>           | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>618</b>            | <b>0.1%</b>                     |
| <b>Minimum</b> |   | <b>-1,442</b>         | <b>-0.2%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-93. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 9 (SR9) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 408                   | 0.1%                            |
| 2    | W, W  | 812                   | 0.2%                            |
| 3    | C, C  | 1,635                 | 0.3%                            |
| 4    | C, C  | 789                   | 0.1%                            |
| 5    | AN, W   | 1,916                 | 0.4%                            |
| 6    | BN, AN  | 1,085                 | 0.2%                            |
| 7    | AN, W   | 1,657                 | 0.3%                            |
| 8    | D, D  | 2,262                 | 0.4%                            |
| 9    | W, W  | 359                   | 0.1%                            |
| 10   | W, W  | 307                   | 0.1%                            |
| 11   | W, AN   | -586                  | -0.1%                           |
| 12   | D, D  | 1,943                 | 0.3%                            |
| 13   | W, W  | 513                   | 0.1%                            |
| 14   | D, D  | 1,649                 | 0.3%                            |
| 15   | C, C  | 1,661                 | 0.3%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 16             | D, C  | 3,206                 | 0.6%                            |
| 17             | C, C  | -1,063                | -0.2%                           |
| 18             | C, C  | -1,276                | -0.2%                           |
| 19             | C, C  | -2,083                | -0.4%                           |
| 20             | AN, W   | -2,051                | -0.4%                           |
| 21             | C, C  | 1,820                 | 0.3%                            |
| 22             | W, W  | 482                   | 0.1%                            |
| 23             | W, W  | 384                   | 0.1%                            |
| 24             | W, W  | -3,278                | -0.6%                           |
| 25             | W, W  | 139                   | 0.0%                            |
| 26             | W, AN   | -314                  | -0.1%                           |
| 27             | AN, AN  | 1,900                 | 0.4%                            |
| 28             | D, D  | 2,601                 | 0.5%                            |
| 29             | D, D  | 2,267                 | 0.4%                            |
| 30             | AN, BN  | 2,357                 | 0.5%                            |
| 31             | BN, D   | 1,083                 | 0.2%                            |
| 32             | AN, W   | 1,330                 | 0.3%                            |
| 33             | W, W  | -229                  | 0.0%                            |
| 34             | D, C  | 1,745                 | 0.3%                            |
| 35             | C, C  | 2,721                 | 0.5%                            |
| 36             | D, BN   | 1,433                 | 0.3%                            |
| 37             | BN, AN  | 2,266                 | 0.5%                            |
| 38             | W, W  | 119                   | 0.0%                            |
| 39             | BN, D   | 328                   | 0.1%                            |
| 40             | D, C  | 3,106                 | 0.5%                            |
| 41             | C, C  | 223                   | 0.0%                            |
| 42             | C, C  | -1,149                | -0.2%                           |
| <b>Average</b> |   | <b>821</b>            | <b>0.2%</b>                     |
| <b>Maximum</b> |   | <b>3,206</b>          | <b>0.6%</b>                     |
| <b>Minimum</b> |   | <b>-3,278</b>         | <b>-0.6%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-94. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 10 (SR10) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 12,850                | 4.5%                            |
| 2    | W, W  | 15,284                | 4.1%                            |
| 3    | C, C  | 18,668                | 3.6%                            |
| 4    | C, C  | -96,529               | -11.9%                          |
| 5    | AN, W   | 24,614                | 6.6%                            |
| 6    | BN, AN  | 13,746                | 3.4%                            |
| 7    | AN, W   | 27,444                | 9.0%                            |
| 8    | D, D  | 27,207                | 6.1%                            |
| 9    | W, W  | 463                   | 0.2%                            |
| 10   | W, W  | 77                    | 0.0%                            |
| 11   | W, AN   | -7,452                | -2.4%                           |
| 12   | D, D  | 23,777                | 5.3%                            |
| 13   | W, W  | 7,787                 | 2.5%                            |
| 14   | D, D  | 22,235                | 4.9%                            |
| 15   | C, C  | 16,765                | 3.2%                            |
| 16   | D, C  | 30,541                | 5.6%                            |
| 17   | C, C  | -14,900               | -2.4%                           |
| 18   | C, C  | -21,097               | -2.7%                           |
| 19   | C, C  | -19,136               | -2.5%                           |
| 20   | AN, W   | -9,723                | -2.3%                           |
| 21   | C, C  | 23,925                | 4.3%                            |
| 22   | W, W  | 5,625                 | 1.6%                            |
| 23   | W, W  | 1,733                 | 0.5%                            |
| 24   | W, W  | -10,864               | -3.5%                           |
| 25   | W, W  | 560                   | 0.2%                            |
| 26   | W, AN   | -2,974                | -1.1%                           |
| 27   | AN, AN  | 28,487                | 7.2%                            |
| 28   | D, D  | 27,545                | 6.0%                            |
| 29   | D, D  | 25,717                | 5.5%                            |
| 30   | AN, BN  | 26,739                | 6.2%                            |
| 31   | BN, D   | 22,812                | 4.9%                            |
| 32   | AN, W   | 16,802                | 5.5%                            |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -2,733                | -0.9%                           |
| 34             | D, C  | 17,160                | 4.1%                            |
| 35             | C, C  | 32,791                | 6.8%                            |
| 36             | D, BN   | 18,304                | 3.2%                            |
| 37             | BN, AN  | 24,010                | 5.6%                            |
| 38             | W, W  | 3,653                 | 1.3%                            |
| 39             | BN, D   | -2,422                | -0.6%                           |
| 40             | D, C  | 30,143                | 6.7%                            |
| 41             | C, C  | -63,938               | -8.3%                           |
| 42             | C, C  | -14,648               | -2.0%                           |
| <b>Average</b> |   | <b>6,692</b>          | <b>2.1%</b>                     |
| <b>Maximum</b> |   | <b>32,791</b>         | <b>9.0%</b>                     |
| <b>Minimum</b> |   | <b>-96,529</b>        | <b>-11.9%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-95. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 11 (SR11) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 0                     | 0.0%                            |
| 2    | W, W  | -5                    | 0.0%                            |
| 3    | C, C  | -3,188                | -0.8%                           |
| 4    | C, C  | -328                  | -0.1%                           |
| 5    | AN, W   | -14                   | 0.0%                            |
| 6    | BN, AN  | -4                    | 0.0%                            |
| 7    | AN, W   | 14                    | 0.0%                            |
| 8    | D, D  | -3,284                | -0.9%                           |
| 9    | W, W  | -48                   | 0.0%                            |
| 10   | W, W  | -17                   | 0.0%                            |
| 11   | W, AN   | 22                    | 0.0%                            |
| 12   | D, D  | -7                    | 0.0%                            |
| 13   | W, W  | 41                    | 0.0%                            |
| 14   | D, D  | -18                   | 0.0%                            |
| 15   | C, C  | -49                   | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 16             | D, C  | -85                   | 0.0%                            |
| 17             | C, C  | -113                  | 0.0%                            |
| 18             | C, C  | -47                   | 0.0%                            |
| 19             | C, C  | -219                  | -0.1%                           |
| 20             | AN, W   | -2,827                | -0.8%                           |
| 21             | C, C  | 692                   | 0.2%                            |
| 22             | W, W  | 344                   | 0.1%                            |
| 23             | W, W  | 71                    | 0.0%                            |
| 24             | W, W  | 9,723                 | 3.0%                            |
| 25             | W, W  | 7,582                 | 3.0%                            |
| 26             | W, AN   | -1                    | 0.0%                            |
| 27             | AN, AN  | -60                   | 0.0%                            |
| 28             | D, D  | 137                   | 0.0%                            |
| 29             | D, D  | 114                   | 0.0%                            |
| 30             | AN, BN  | 107                   | 0.0%                            |
| 31             | BN, D   | -15                   | 0.0%                            |
| 32             | AN, W   | 12,293                | 4.6%                            |
| 33             | W, W  | 122                   | 0.0%                            |
| 34             | D, C  | 11                    | 0.0%                            |
| 35             | C, C  | -167                  | 0.0%                            |
| 36             | D, BN   | -19                   | 0.0%                            |
| 37             | BN, AN  | -137                  | 0.0%                            |
| 38             | W, W  | -10                   | 0.0%                            |
| 39             | BN, D   | -360                  | -0.1%                           |
| 40             | D, C  | 314                   | 0.1%                            |
| 41             | C, C  | -469                  | -0.1%                           |
| 42             | C, C  | -1                    | 0.0%                            |
| <b>Average</b> |   | <b>478</b>            | <b>0.2%</b>                     |
| <b>Maximum</b> |   | <b>12,293</b>         | <b>4.6%</b>                     |
| <b>Minimum</b> |   | <b>-3,284</b>         | <b>-0.9%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-96. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 12 (SR12) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 98                    | 0.0%                            |
| 2    | W, W  | 9                     | 0.0%                            |
| 3    | C, C  | 22                    | 0.0%                            |
| 4    | C, C  | -98                   | 0.0%                            |
| 5    | AN, W   | 77                    | 0.0%                            |
| 6    | BN, AN  | -36                   | 0.0%                            |
| 7    | AN, W   | -75                   | 0.0%                            |
| 8    | D, D  | 12                    | 0.0%                            |
| 9    | W, W  | 112                   | 0.0%                            |
| 10   | W, W  | 16                    | 0.0%                            |
| 11   | W, AN   | 15                    | 0.0%                            |
| 12   | D, D  | -252                  | 0.0%                            |
| 13   | W, W  | 95                    | 0.0%                            |
| 14   | D, D  | -4                    | 0.0%                            |
| 15   | C, C  | 79                    | 0.0%                            |
| 16   | D, C  | -70                   | 0.0%                            |
| 17   | C, C  | -384                  | -0.1%                           |
| 18   | C, C  | -187                  | 0.0%                            |
| 19   | C, C  | -53                   | 0.0%                            |
| 20   | AN, W   | -8,390                | -1.4%                           |
| 21   | C, C  | 2,149                 | 0.3%                            |
| 22   | W, W  | 711                   | 0.2%                            |
| 23   | W, W  | 1                     | 0.0%                            |
| 24   | W, W  | -24                   | 0.0%                            |
| 25   | W, W  | 40                    | 0.0%                            |
| 26   | W, AN   | -62                   | 0.0%                            |
| 27   | AN, AN  | -104                  | 0.0%                            |
| 28   | D, D  | -69                   | 0.0%                            |
| 29   | D, D  | -77                   | 0.0%                            |
| 30   | AN, BN  | 147                   | 0.0%                            |
| 31   | BN, D   | 30                    | 0.0%                            |
| 32   | AN, W   | 234                   | 0.1%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 20                    | 0.0%                            |
| 34             | D, C  | 22                    | 0.0%                            |
| 35             | C, C  | 119                   | 0.0%                            |
| 36             | D, BN   | -57                   | 0.0%                            |
| 37             | BN, AN  | -13                   | 0.0%                            |
| 38             | W, W  | 43                    | 0.0%                            |
| 39             | BN, D   | -271                  | 0.0%                            |
| 40             | D, C  | -142                  | 0.0%                            |
| 41             | C, C  | -447                  | -0.1%                           |
| 42             | C, C  | -122                  | 0.0%                            |
| <b>Average</b> |   | <b>-164</b>           | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>2,149</b>          | <b>0.3%</b>                     |
| <b>Minimum</b> |   | <b>-8,390</b>         | <b>-1.4%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-97. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 13 (SR13) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -104                  | 0.0%                            |
| 2    | W, W  | -205                  | 0.0%                            |
| 3    | C, C  | -40                   | 0.0%                            |
| 4    | C, C  | -10,468               | -0.4%                           |
| 5    | AN, W   | -12,092               | -0.7%                           |
| 6    | BN, AN  | 67                    | 0.0%                            |
| 7    | AN, W   | -508                  | 0.0%                            |
| 8    | D, D  | 491                   | 0.0%                            |
| 9    | W, W  | 311                   | 0.0%                            |
| 10   | W, W  | -244                  | 0.0%                            |
| 11   | W, AN   | 3,338                 | 0.2%                            |
| 12   | D, D  | -4,222                | -0.2%                           |
| 13   | W, W  | 6                     | 0.0%                            |
| 14   | D, D  | -326                  | 0.0%                            |
| 15   | C, C  | -47                   | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 16             | D, C  | 291                   | 0.0%                            |
| 17             | C, C  | -952                  | 0.0%                            |
| 18             | C, C  | -1,924                | -0.1%                           |
| 19             | C, C  | -1,035                | 0.0%                            |
| 20             | AN, W   | -567                  | 0.0%                            |
| 21             | C, C  | -611                  | 0.0%                            |
| 22             | W, W  | 473                   | 0.0%                            |
| 23             | W, W  | 213                   | 0.0%                            |
| 24             | W, W  | -490                  | 0.0%                            |
| 25             | W, W  | -267                  | 0.0%                            |
| 26             | W, AN   | -87                   | 0.0%                            |
| 27             | AN, AN  | 123                   | 0.0%                            |
| 28             | D, D  | 311                   | 0.0%                            |
| 29             | D, D  | -1,015                | 0.0%                            |
| 30             | AN, BN  | -85                   | 0.0%                            |
| 31             | BN, D   | -788                  | 0.0%                            |
| 32             | AN, W   | -880                  | -0.1%                           |
| 33             | W, W  | -68                   | 0.0%                            |
| 34             | D, C  | -364                  | 0.0%                            |
| 35             | C, C  | -241                  | 0.0%                            |
| 36             | D, BN   | -800                  | 0.0%                            |
| 37             | BN, AN  | -793                  | 0.0%                            |
| 38             | W, W  | -46                   | 0.0%                            |
| 39             | BN, D   | -296                  | 0.0%                            |
| 40             | D, C  | -1,471                | -0.1%                           |
| 41             | C, C  | -7,761                | -0.3%                           |
| 42             | C, C  | -2,358                | -0.1%                           |
| <b>Average</b> |   | <b>-1,084</b>         | <b>-0.1%</b>                    |
| <b>Maximum</b> |   | <b>3,338</b>          | <b>0.2%</b>                     |
| <b>Minimum</b> |   | <b>-12,092</b>        | <b>-0.7%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-98. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 14 (SR14) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -2,552                | -1.2%                           |
| 2    | W, W  | 14,586                | 4.4%                            |
| 3    | C, C  | 60,379                | 9.2%                            |
| 4    | C, C  | 24,503                | 1.9%                            |
| 5    | AN, W   | 67,841                | 17.5%                           |
| 6    | BN, AN  | 33,285                | 7.0%                            |
| 7    | AN, W   | 57,813                | 23.6%                           |
| 8    | D, D  | 59,237                | 12.6%                           |
| 9    | W, W  | 19,366                | 6.6%                            |
| 10   | W, W  | 11,169                | 6.6%                            |
| 11   | W, AN   | 5,462                 | 2.8%                            |
| 12   | D, D  | 56,025                | 11.2%                           |
| 13   | W, W  | 14,598                | 5.8%                            |
| 14   | D, D  | 57,815                | 11.4%                           |
| 15   | C, C  | 50,789                | 7.0%                            |
| 16   | D, C  | 77,158                | 10.3%                           |
| 17   | C, C  | -42,758               | -3.9%                           |
| 18   | C, C  | -25,238               | -1.9%                           |
| 19   | C, C  | -60,103               | -4.6%                           |
| 20   | AN, W   | -38,028               | -6.2%                           |
| 21   | C, C  | 74,639                | 9.2%                            |
| 22   | W, W  | 31,598                | 9.1%                            |
| 23   | W, W  | 23,196                | 8.3%                            |
| 24   | W, W  | -23,998               | -9.2%                           |
| 25   | W, W  | 12,500                | 5.9%                            |
| 26   | W, AN   | 11,616                | 4.8%                            |
| 27   | AN, AN  | 65,904                | 11.2%                           |
| 28   | D, D  | 61,129                | 8.0%                            |
| 29   | D, D  | 63,963                | 8.1%                            |
| 30   | AN, BN  | 82,786                | 12.8%                           |
| 31   | BN, D   | 102,848               | 14.3%                           |
| 32   | AN, W   | 34,593                | 9.9%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 13,134                | 6.0%                            |
| 34             | D, C  | 46,129                | 7.7%                            |
| 35             | C, C  | 80,597                | 9.3%                            |
| 36             | D, BN   | 53,928                | 4.5%                            |
| 37             | BN, AN  | 59,622                | 7.4%                            |
| 38             | W, W  | 12,141                | 4.2%                            |
| 39             | BN, D   | -14,102               | -3.2%                           |
| 40             | D, C  | 75,595                | 9.7%                            |
| 41             | C, C  | 35,794                | 2.9%                            |
| 42             | C, C  | -40,040               | -2.9%                           |
| <b>Average</b> |   | <b>31,070</b>         | <b>6.2%</b>                     |
| <b>Maximum</b> |   | <b>102,848</b>        | <b>23.6%</b>                    |
| <b>Minimum</b> |   | <b>-60,103</b>        | <b>-9.2%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-99. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 15 (SR15) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 6,218                 | 0.5%                            |
| 2    | W, W  | 5,083                 | 0.4%                            |
| 3    | C, C  | -27,099               | -1.5%                           |
| 4    | C, C  | -15,132               | -0.8%                           |
| 5    | AN, W   | 3,978                 | 0.3%                            |
| 6    | BN, AN  | 8,766                 | 0.7%                            |
| 7    | AN, W   | 6,426                 | 0.5%                            |
| 8    | D, D  | 5,129                 | 0.3%                            |
| 9    | W, W  | -5,257                | -0.5%                           |
| 10   | W, W  | 23                    | 0.0%                            |
| 11   | W, AN   | -52                   | 0.0%                            |
| 12   | D, D  | 5,330                 | 0.3%                            |
| 13   | W, W  | 1,705                 | 0.1%                            |
| 14   | D, D  | 2,290                 | 0.1%                            |
| 15   | C, C  | -1,485                | -0.1%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 16             | D, C  | 6,534                 | 0.4%                            |
| 17             | C, C  | -9,985                | -0.5%                           |
| 18             | C, C  | -3,274                | -0.2%                           |
| 19             | C, C  | -1,887                | -0.1%                           |
| 20             | AN, W   | 1,254                 | 0.1%                            |
| 21             | C, C  | 4,627                 | 0.3%                            |
| 22             | W, W  | -261                  | 0.0%                            |
| 23             | W, W  | -11,406               | -0.9%                           |
| 24             | W, W  | -3,242                | -0.2%                           |
| 25             | W, W  | -884                  | -0.1%                           |
| 26             | W, AN   | 1,978                 | 0.1%                            |
| 27             | AN, AN  | 702                   | 0.0%                            |
| 28             | D, D  | 11,120                | 0.7%                            |
| 29             | D, D  | 3,725                 | 0.2%                            |
| 30             | AN, BN  | 5,459                 | 0.4%                            |
| 31             | BN, D   | -2,090                | -0.1%                           |
| 32             | AN, W   | 1,572                 | 0.1%                            |
| 33             | W, W  | 3,390                 | 0.3%                            |
| 34             | D, C  | -367                  | 0.0%                            |
| 35             | C, C  | 5,592                 | 0.3%                            |
| 36             | D, BN   | 12,780                | 0.7%                            |
| 37             | BN, AN  | 3,664                 | 0.2%                            |
| 38             | W, W  | -5,945                | -0.5%                           |
| 39             | BN, D   | 66                    | 0.0%                            |
| 40             | D, C  | 2,299                 | 0.1%                            |
| 41             | C, C  | -2,122                | -0.1%                           |
| 42             | C, C  | -4,505                | -0.2%                           |
| <b>Average</b> |   | <b>350</b>            | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>12,780</b>         | <b>0.7%</b>                     |
| <b>Minimum</b> |   | <b>-27,099</b>        | <b>-1.5%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-100. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 16 (SR16) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 26                    | 0.0%                            |
| 2    | W, W  | -5                    | 0.0%                            |
| 3    | C, C  | -14                   | 0.0%                            |
| 4    | C, C  | 99                    | 0.0%                            |
| 5    | AN, W   | -1                    | 0.0%                            |
| 6    | BN, AN  | 0                     | 0.0%                            |
| 7    | AN, W   | -6                    | 0.0%                            |
| 8    | D, D  | 13                    | 0.0%                            |
| 9    | W, W  | -32                   | 0.0%                            |
| 10   | W, W  | 0                     | 0.0%                            |
| 11   | W, AN   | 7                     | 0.0%                            |
| 12   | D, D  | -10                   | 0.0%                            |
| 13   | W, W  | 55                    | 0.1%                            |
| 14   | D, D  | 67                    | 0.0%                            |
| 15   | C, C  | 115                   | 0.1%                            |
| 16   | D, C  | -102                  | -0.1%                           |
| 17   | C, C  | 139                   | 0.1%                            |
| 18   | C, C  | -14                   | 0.0%                            |
| 19   | C, C  | 15                    | 0.0%                            |
| 20   | AN, W   | -92                   | -0.1%                           |
| 21   | C, C  | 22                    | 0.0%                            |
| 22   | W, W  | 20                    | 0.0%                            |
| 23   | W, W  | 0                     | 0.0%                            |
| 24   | W, W  | 14                    | 0.0%                            |
| 25   | W, W  | 0                     | 0.0%                            |
| 26   | W, AN   | -10                   | 0.0%                            |
| 27   | AN, AN  | -29                   | 0.0%                            |
| 28   | D, D  | 0                     | 0.0%                            |
| 29   | D, D  | -32                   | 0.0%                            |
| 30   | AN, BN  | 117                   | 0.1%                            |
| 31   | BN, D   | -34                   | 0.0%                            |
| 32   | AN, W   | 0                     | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 11                    | 0.0%                            |
| 34             | D, C  | 0                     | 0.0%                            |
| 35             | C, C  | -48                   | 0.0%                            |
| 36             | D, BN   | 73                    | 0.0%                            |
| 37             | BN, AN  | -25                   | 0.0%                            |
| 38             | W, W  | 0                     | 0.0%                            |
| 39             | BN, D   | -74                   | 0.0%                            |
| 40             | D, C  | -15                   | 0.0%                            |
| 41             | C, C  | 154                   | 0.0%                            |
| 42             | C, C  | 2                     | 0.0%                            |
| <b>Average</b> |   | <b>10</b>             | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>154</b>            | <b>0.1%</b>                     |
| <b>Minimum</b> |   | <b>-102</b>           | <b>-0.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-101. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 17 (SR17) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -50                   | 0.0%                            |
| 2    | W, W  | -87                   | 0.0%                            |
| 3    | C, C  | 27                    | 0.0%                            |
| 4    | C, C  | 43                    | 0.0%                            |
| 5    | AN, W   | -5                    | 0.0%                            |
| 6    | BN, AN  | -16                   | 0.0%                            |
| 7    | AN, W   | -50                   | 0.0%                            |
| 8    | D, D  | -47                   | 0.0%                            |
| 9    | W, W  | 4                     | 0.0%                            |
| 10   | W, W  | -34                   | 0.0%                            |
| 11   | W, AN   | 133                   | 0.0%                            |
| 12   | D, D  | -83                   | 0.0%                            |
| 13   | W, W  | -196                  | -0.1%                           |
| 14   | D, D  | 136                   | 0.0%                            |
| 15   | C, C  | -123                  | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 16             | D, C  | -51                   | 0.0%                            |
| 17             | C, C  | 58                    | 0.0%                            |
| 18             | C, C  | -12                   | 0.0%                            |
| 19             | C, C  | -17                   | 0.0%                            |
| 20             | AN, W   | 7                     | 0.0%                            |
| 21             | C, C  | -4                    | 0.0%                            |
| 22             | W, W  | 15                    | 0.0%                            |
| 23             | W, W  | -54                   | 0.0%                            |
| 24             | W, W  | 0                     | 0.0%                            |
| 25             | W, W  | -33                   | 0.0%                            |
| 26             | W, AN   | 19                    | 0.0%                            |
| 27             | AN, AN  | 2                     | 0.0%                            |
| 28             | D, D  | -19                   | 0.0%                            |
| 29             | D, D  | -12                   | 0.0%                            |
| 30             | AN, BN  | -32                   | 0.0%                            |
| 31             | BN, D   | 116                   | 0.0%                            |
| 32             | AN, W   | 83                    | 0.0%                            |
| 33             | W, W  | -108                  | -0.1%                           |
| 34             | D, C  | 55                    | 0.0%                            |
| 35             | C, C  | -19                   | 0.0%                            |
| 36             | D, BN   | 58                    | 0.0%                            |
| 37             | BN, AN  | 149                   | 0.0%                            |
| 38             | W, W  | 33                    | 0.0%                            |
| 39             | BN, D   | -14                   | 0.0%                            |
| 40             | D, C  | -42                   | 0.0%                            |
| 41             | C, C  | 27                    | 0.0%                            |
| 42             | C, C  | 51                    | 0.0%                            |
| <b>Average</b> |   | <b>-2</b>             | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>149</b>            | <b>0.0%</b>                     |
| <b>Minimum</b> |   | <b>-196</b>           | <b>-0.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-102. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 18 (SR18) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -74                   | 0.0%                            |
| 2    | W, W  | 157                   | 0.0%                            |
| 3    | C, C  | 62                    | 0.0%                            |
| 4    | C, C  | 1,599                 | 0.1%                            |
| 5    | AN, W   | 329                   | 0.0%                            |
| 6    | BN, AN  | 137                   | 0.0%                            |
| 7    | AN, W   | -157                  | 0.0%                            |
| 8    | D, D  | -26                   | 0.0%                            |
| 9    | W, W  | 205                   | 0.0%                            |
| 10   | W, W  | 60                    | 0.0%                            |
| 11   | W, AN   | 4,575                 | 0.4%                            |
| 12   | D, D  | -4,354                | -0.3%                           |
| 13   | W, W  | -609                  | -0.1%                           |
| 14   | D, D  | 148                   | 0.0%                            |
| 15   | C, C  | 14                    | 0.0%                            |
| 16   | D, C  | 476                   | 0.0%                            |
| 17   | C, C  | -150                  | 0.0%                            |
| 18   | C, C  | 270                   | 0.0%                            |
| 19   | C, C  | 212                   | 0.0%                            |
| 20   | AN, W   | -140                  | 0.0%                            |
| 21   | C, C  | 1,315                 | 0.1%                            |
| 22   | W, W  | -157                  | 0.0%                            |
| 23   | W, W  | 107                   | 0.0%                            |
| 24   | W, W  | -235                  | 0.0%                            |
| 25   | W, W  | -87                   | 0.0%                            |
| 26   | W, AN   | -275                  | 0.0%                            |
| 27   | AN, AN  | -59                   | 0.0%                            |
| 28   | D, D  | -85                   | 0.0%                            |
| 29   | D, D  | -71                   | 0.0%                            |
| 30   | AN, BN  | 4                     | 0.0%                            |
| 31   | BN, D   | -318                  | 0.0%                            |
| 32   | AN, W   | -18                   | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -70                   | 0.0%                            |
| 34             | D, C  | 149                   | 0.0%                            |
| 35             | C, C  | -146                  | 0.0%                            |
| 36             | D, BN   | 454                   | 0.0%                            |
| 37             | BN, AN  | -256                  | 0.0%                            |
| 38             | W, W  | -234                  | 0.0%                            |
| 39             | BN, D   | 180                   | 0.0%                            |
| 40             | D, C  | -195                  | 0.0%                            |
| 41             | C, C  | 156                   | 0.0%                            |
| 42             | C, C  | 1,419                 | 0.1%                            |
| <b>Average</b> |   | <b>103</b>            | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>4,575</b>          | <b>0.4%</b>                     |
| <b>Minimum</b> |   | <b>-4,354</b>         | <b>-0.3%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-103. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 19 (SR19) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 0                     | 0.0%                            |
| 2    | W, W  | -1                    | 0.0%                            |
| 3    | C, C  | 0                     | 0.0%                            |
| 4    | C, C  | 0                     | 0.0%                            |
| 5    | AN, W   | 0                     | 0.0%                            |
| 6    | BN, AN  | -1                    | 0.0%                            |
| 7    | AN, W   | 22                    | 0.0%                            |
| 8    | D, D  | 0                     | 0.0%                            |
| 9    | W, W  | 0                     | 0.0%                            |
| 10   | W, W  | 0                     | 0.0%                            |
| 11   | W, AN   | 17                    | 0.0%                            |
| 12   | D, D  | 21                    | 0.0%                            |
| 13   | W, W  | -1                    | 0.0%                            |
| 14   | D, D  | 12                    | 0.0%                            |
| 15   | C, C  | 61                    | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 16             | D, C  | -1                    | 0.0%                            |
| 17             | C, C  | 0                     | 0.0%                            |
| 18             | C, C  | 37                    | 0.0%                            |
| 19             | C, C  | 0                     | 0.0%                            |
| 20             | AN, W   | 0                     | 0.0%                            |
| 21             | C, C  | 0                     | 0.0%                            |
| 22             | W, W  | -31                   | 0.0%                            |
| 23             | W, W  | 30                    | 0.0%                            |
| 24             | W, W  | 175                   | 0.1%                            |
| 25             | W, W  | 23                    | 0.0%                            |
| 26             | W, AN   | -19                   | 0.0%                            |
| 27             | AN, AN  | -11                   | 0.0%                            |
| 28             | D, D  | 5                     | 0.0%                            |
| 29             | D, D  | -3                    | 0.0%                            |
| 30             | AN, BN  | 0                     | 0.0%                            |
| 31             | BN, D   | 12                    | 0.0%                            |
| 32             | AN, W   | 0                     | 0.0%                            |
| 33             | W, W  | 0                     | 0.0%                            |
| 34             | D, C  | 0                     | 0.0%                            |
| 35             | C, C  | -17                   | 0.0%                            |
| 36             | D, BN   | 0                     | 0.0%                            |
| 37             | BN, AN  | 0                     | 0.0%                            |
| 38             | W, W  | -43                   | 0.0%                            |
| 39             | BN, D   | 0                     | 0.0%                            |
| 40             | D, C  | -20                   | 0.0%                            |
| 41             | C, C  | 0                     | 0.0%                            |
| 42             | C, C  | 0                     | 0.0%                            |
| <b>Average</b> |   | <b>6</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>175</b>            | <b>0.1%</b>                     |
| <b>Minimum</b> |   | <b>-43</b>            | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-104. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 20 (SR20) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 0                     | 0.0%                            |
| 2    | W, W  | 0                     | 0.0%                            |
| 3    | C, C  | 0                     | 0.0%                            |
| 4    | C, C  | 4                     | 0.0%                            |
| 5    | AN, W   | 2                     | 0.0%                            |
| 6    | BN, AN  | 1                     | 0.0%                            |
| 7    | AN, W   | -1                    | 0.0%                            |
| 8    | D, D  | 0                     | 0.0%                            |
| 9    | W, W  | 0                     | 0.0%                            |
| 10   | W, W  | 0                     | 0.0%                            |
| 11   | W, AN   | 2                     | 0.0%                            |
| 12   | D, D  | -2                    | 0.0%                            |
| 13   | W, W  | -38                   | 0.0%                            |
| 14   | D, D  | -58                   | 0.0%                            |
| 15   | C, C  | -21                   | 0.0%                            |
| 16   | D, C  | 106                   | 0.0%                            |
| 17   | C, C  | 36                    | 0.0%                            |
| 18   | C, C  | 0                     | 0.0%                            |
| 19   | C, C  | 110                   | 0.0%                            |
| 20   | AN, W   | -48                   | 0.0%                            |
| 21   | C, C  | -5                    | 0.0%                            |
| 22   | W, W  | -27                   | 0.0%                            |
| 23   | W, W  | -5                    | 0.0%                            |
| 24   | W, W  | 20                    | 0.0%                            |
| 25   | W, W  | -23                   | 0.0%                            |
| 26   | W, AN   | 0                     | 0.0%                            |
| 27   | AN, AN  | 0                     | 0.0%                            |
| 28   | D, D  | 1                     | 0.0%                            |
| 29   | D, D  | 0                     | 0.0%                            |
| 30   | AN, BN  | 0                     | 0.0%                            |
| 31   | BN, D   | 132                   | 0.0%                            |
| 32   | AN, W   | 40                    | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -140                  | 0.0%                            |
| 34             | D, C  | -2                    | 0.0%                            |
| 35             | C, C  | 18                    | 0.0%                            |
| 36             | D, BN   | -1                    | 0.0%                            |
| 37             | BN, AN  | 15                    | 0.0%                            |
| 38             | W, W  | 2                     | 0.0%                            |
| 39             | BN, D   | -7                    | 0.0%                            |
| 40             | D, C  | -1                    | 0.0%                            |
| 41             | C, C  | 4                     | 0.0%                            |
| 42             | C, C  | 3                     | 0.0%                            |
| <b>Average</b> |   | <b>3</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>132</b>            | <b>0.0%</b>                     |
| <b>Minimum</b> |   | <b>-140</b>           | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-105. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 21 (SR21) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 47                    | 0.0%                            |
| 2    | W, W  | -153                  | 0.0%                            |
| 3    | C, C  | 1                     | 0.0%                            |
| 4    | C, C  | -96                   | 0.0%                            |
| 5    | AN, W   | -34                   | 0.0%                            |
| 6    | BN, AN  | -2                    | 0.0%                            |
| 7    | AN, W   | 55                    | 0.0%                            |
| 8    | D, D  | 39                    | 0.0%                            |
| 9    | W, W  | 9                     | 0.0%                            |
| 10   | W, W  | -19                   | 0.0%                            |
| 11   | W, AN   | 10                    | 0.0%                            |
| 12   | D, D  | -13                   | 0.0%                            |
| 13   | W, W  | -105                  | 0.0%                            |
| 14   | D, D  | -130                  | 0.0%                            |
| 15   | C, C  | 119                   | 0.0%                            |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 16             | D, C  | 119                   | 0.0%                            |
| 17             | C, C  | -48                   | 0.0%                            |
| 18             | C, C  | -59                   | 0.0%                            |
| 19             | C, C  | 192                   | 0.0%                            |
| 20             | AN, W   | 86                    | 0.0%                            |
| 21             | C, C  | 27                    | 0.0%                            |
| 22             | W, W  | 1                     | 0.0%                            |
| 23             | W, W  | 45                    | 0.0%                            |
| 24             | W, W  | 17                    | 0.0%                            |
| 25             | W, W  | 23                    | 0.0%                            |
| 26             | W, AN   | 44                    | 0.0%                            |
| 27             | AN, AN  | 102                   | 0.0%                            |
| 28             | D, D  | 0                     | 0.0%                            |
| 29             | D, D  | 12                    | 0.0%                            |
| 30             | AN, BN  | 14                    | 0.0%                            |
| 31             | BN, D   | -35                   | 0.0%                            |
| 32             | AN, W   | -48                   | 0.0%                            |
| 33             | W, W  | -18                   | 0.0%                            |
| 34             | D, C  | -12                   | 0.0%                            |
| 35             | C, C  | 39                    | 0.0%                            |
| 36             | D, BN   | 34                    | 0.0%                            |
| 37             | BN, AN  | -17                   | 0.0%                            |
| 38             | W, W  | 136                   | 0.0%                            |
| 39             | BN, D   | -56                   | 0.0%                            |
| 40             | D, C  | -27                   | 0.0%                            |
| 41             | C, C  | 6                     | 0.0%                            |
| 42             | C, C  | 14                    | 0.0%                            |
| <b>Average</b> |   | <b>8</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>192</b>            | <b>0.0%</b>                     |
| <b>Minimum</b> |   | <b>-153</b>           | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

**I-1.1.6 Changes in Groundwater Pumping, Alternative 2 without TUCP Systemwide VA Compared to No Action Alternative**

Table I.1-106 through Table I.1-126 provide the annual simulated groundwater pumping through the model simulation period for each of the 21 model subregions for Alternative 2 without TUCP Systemwide VA compared to the No Action Alternative.

Table I.1-106. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 1 (SR1) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 46                    | 0.1%                            |
| 2    | W, W  | -36                   | -0.1%                           |
| 3    | C, C  | 801                   | 1.3%                            |
| 4    | C, C  | 6,353                 | 8.3%                            |
| 5    | AN, W   | 146                   | 0.2%                            |
| 6    | BN, AN  | 657                   | 1.1%                            |
| 7    | AN, W   | 96                    | 0.2%                            |
| 8    | D, D  | 29                    | 0.0%                            |
| 9    | W, W  | 72                    | 0.1%                            |
| 10   | W, W  | 108                   | 0.2%                            |
| 11   | W, AN   | 135                   | 0.2%                            |
| 12   | D, D  | 563                   | 0.9%                            |
| 13   | W, W  | 4                     | 0.0%                            |
| 14   | D, D  | 1,901                 | 2.6%                            |
| 15   | C, C  | 3,728                 | 5.0%                            |
| 16   | D, C  | 824                   | 1.2%                            |
| 17   | C, C  | -2,716                | -3.8%                           |
| 18   | C, C  | 4,771                 | 5.8%                            |
| 19   | C, C  | 2,284                 | 2.6%                            |
| 20   | AN, W   | 270                   | 0.4%                            |
| 21   | C, C  | 4,248                 | 6.0%                            |
| 22   | W, W  | 851                   | 1.3%                            |
| 23   | W, W  | -96                   | -0.2%                           |
| 24   | W, W  | -186                  | -0.3%                           |
| 25   | W, W  | -51                   | -0.1%                           |
| 26   | W, AN   | -72                   | -0.1%                           |
| 27   | AN, AN  | -35                   | -0.1%                           |
| 28   | D, D  | 1,017                 | 1.6%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 29             | D, D  | 341                   | 0.5%                            |
| 30             | AN, BN  | -48                   | -0.1%                           |
| 31             | BN, D   | -28                   | 0.0%                            |
| 32             | AN, W   | -33                   | -0.1%                           |
| 33             | W, W  | -70                   | -0.1%                           |
| 34             | D, C  | 27                    | 0.0%                            |
| 35             | C, C  | 2,323                 | 3.3%                            |
| 36             | D, BN   | 16                    | 0.0%                            |
| 37             | BN, AN  | -188                  | -0.3%                           |
| 38             | W, W  | -13                   | 0.0%                            |
| 39             | BN, D   | -81                   | -0.1%                           |
| 40             | D, C  | 3,554                 | 5.1%                            |
| 41             | C, C  | 6,941                 | 8.1%                            |
| 42             | C, C  | -27                   | 0.0%                            |
| <b>Average</b> |   | <b>915</b>            | <b>1.2%</b>                     |
| <b>Maximum</b> |   | <b>6,941</b>          | <b>8.3%</b>                     |
| <b>Minimum</b> |   | <b>-2,716</b>         | <b>-3.8%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-107. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 2 (SR2) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 80                    | 0.0%                            |
| 2    | W, W  | 141                   | 0.0%                            |
| 3    | C, C  | 2,814                 | 0.5%                            |
| 4    | C, C  | 4,643                 | 0.7%                            |
| 5    | AN, W   | 718                   | 0.1%                            |
| 6    | BN, AN  | 1,442                 | 0.3%                            |
| 7    | AN, W   | 181                   | 0.0%                            |
| 8    | D, D  | 1,073                 | 0.2%                            |
| 9    | W, W  | 64                    | 0.0%                            |
| 10   | W, W  | -180                  | 0.0%                            |
| 11   | W, AN   | -71                   | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 12             | D, D  | 2,993                 | 0.5%                            |
| 13             | W, W  | 655                   | 0.1%                            |
| 14             | D, D  | 4,221                 | 0.7%                            |
| 15             | C, C  | 10,699                | 1.7%                            |
| 16             | D, C  | 2,920                 | 0.5%                            |
| 17             | C, C  | 3,164                 | 0.6%                            |
| 18             | C, C  | 5,750                 | 1.0%                            |
| 19             | C, C  | 735                   | 0.1%                            |
| 20             | AN, W   | 39                    | 0.0%                            |
| 21             | C, C  | 11,335                | 2.0%                            |
| 22             | W, W  | 3,207                 | 0.6%                            |
| 23             | W, W  | -55                   | 0.0%                            |
| 24             | W, W  | -135                  | 0.0%                            |
| 25             | W, W  | -151                  | 0.0%                            |
| 26             | W, AN   | 40                    | 0.0%                            |
| 27             | AN, AN  | -92                   | 0.0%                            |
| 28             | D, D  | 2,426                 | 0.5%                            |
| 29             | D, D  | -78                   | 0.0%                            |
| 30             | AN, BN  | -98                   | 0.0%                            |
| 31             | BN, D   | -484                  | -0.1%                           |
| 32             | AN, W   | 34                    | 0.0%                            |
| 33             | W, W  | -66                   | 0.0%                            |
| 34             | D, C  | 242                   | 0.0%                            |
| 35             | C, C  | 5,044                 | 0.9%                            |
| 36             | D, BN   | 128                   | 0.0%                            |
| 37             | BN, AN  | -151                  | 0.0%                            |
| 38             | W, W  | -41                   | 0.0%                            |
| 39             | BN, D   | -49                   | 0.0%                            |
| 40             | D, C  | 7,204                 | 1.2%                            |
| 41             | C, C  | 5,835                 | 0.9%                            |
| 42             | C, C  | 5,207                 | 0.8%                            |
| <b>Average</b> |   | <b>1,938</b>          | <b>0.3%</b>                     |
| <b>Maximum</b> |   | <b>11,335</b>         | <b>2.0%</b>                     |
| <b>Minimum</b> |   | <b>-484</b>           | <b>-0.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-108. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 3 (SR3) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -2,274                | -0.8%                           |
| 2    | W, W  | -346                  | -0.1%                           |
| 3    | C, C  | 13,913                | 3.1%                            |
| 4    | C, C  | 73,212                | 12.7%                           |
| 5    | AN, W   | 3,625                 | 1.0%                            |
| 6    | BN, AN  | 7,931                 | 2.1%                            |
| 7    | AN, W   | 525                   | 0.2%                            |
| 8    | D, D  | 5,779                 | 1.6%                            |
| 9    | W, W  | -1,335                | -0.5%                           |
| 10   | W, W  | -2,710                | -1.1%                           |
| 11   | W, AN   | -2,830                | -0.9%                           |
| 12   | D, D  | 14,575                | 3.7%                            |
| 13   | W, W  | 4,684                 | 1.4%                            |
| 14   | D, D  | 22,438                | 5.3%                            |
| 15   | C, C  | 53,694                | 12.0%                           |
| 16   | D, C  | 10,883                | 2.7%                            |
| 17   | C, C  | 25,254                | 5.3%                            |
| 18   | C, C  | 89,146                | 16.7%                           |
| 19   | C, C  | -4,608                | -0.8%                           |
| 20   | AN, W   | 573                   | 0.2%                            |
| 21   | C, C  | 59,608                | 14.9%                           |
| 22   | W, W  | 11,757                | 3.7%                            |
| 23   | W, W  | -2,983                | -1.0%                           |
| 24   | W, W  | -3,121                | -1.0%                           |
| 25   | W, W  | -3,046                | -1.4%                           |
| 26   | W, AN   | -2,367                | -0.9%                           |
| 27   | AN, AN  | -899                  | -0.3%                           |
| 28   | D, D  | 12,888                | 3.5%                            |
| 29   | D, D  | -6,311                | -1.7%                           |
| 30   | AN, BN  | -1,021                | -0.3%                           |
| 31   | BN, D   | -6,850                | -2.0%                           |
| 32   | AN, W   | -428                  | -0.2%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -2,186                | -0.7%                           |
| 34             | D, C  | 2,207                 | 0.6%                            |
| 35             | C, C  | 28,202                | 6.9%                            |
| 36             | D, BN   | 527                   | 0.1%                            |
| 37             | BN, AN  | -416                  | -0.1%                           |
| 38             | W, W  | -2,389                | -0.9%                           |
| 39             | BN, D   | -2,016                | -0.6%                           |
| 40             | D, C  | 37,941                | 9.3%                            |
| 41             | C, C  | 86,459                | 14.9%                           |
| 42             | C, C  | 5,773                 | 1.0%                            |
| <b>Average</b> |   | <b>12,463</b>         | <b>2.6%</b>                     |
| <b>Maximum</b> |   | <b>89,146</b>         | <b>16.7%</b>                    |
| <b>Minimum</b> |   | <b>-6,850</b>         | <b>-2.0%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-109. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 4 (SR4) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -3,156                | -1.0%                           |
| 2    | W, W  | -761                  | -0.2%                           |
| 3    | C, C  | -4,830                | -1.3%                           |
| 4    | C, C  | 31,846                | 8.5%                            |
| 5    | AN, W   | 1,911                 | 0.6%                            |
| 6    | BN, AN  | 4,402                 | 1.3%                            |
| 7    | AN, W   | -4,328                | -1.3%                           |
| 8    | D, D  | 8,643                 | 2.5%                            |
| 9    | W, W  | 6,651                 | 2.2%                            |
| 10   | W, W  | -9,775                | -3.1%                           |
| 11   | W, AN   | -8,853                | -2.6%                           |
| 12   | D, D  | 202                   | 0.1%                            |
| 13   | W, W  | -3,228                | -1.0%                           |
| 14   | D, D  | -2,710                | -0.7%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | -4,075                | -1.2%                           |
| 16             | D, C  | 692                   | 0.2%                            |
| 17             | C, C  | -10,756               | -3.3%                           |
| 18             | C, C  | 29,685                | 9.0%                            |
| 19             | C, C  | -9,455                | -2.7%                           |
| 20             | AN, W   | -640                  | -0.2%                           |
| 21             | C, C  | -3,669                | -1.1%                           |
| 22             | W, W  | -7,061                | -2.1%                           |
| 23             | W, W  | -9,184                | -2.7%                           |
| 24             | W, W  | -9,026                | -2.8%                           |
| 25             | W, W  | -8,587                | -2.7%                           |
| 26             | W, AN   | -8,723                | -2.7%                           |
| 27             | AN, AN  | 2,816                 | 0.9%                            |
| 28             | D, D  | 6,669                 | 2.0%                            |
| 29             | D, D  | 7,632                 | 2.3%                            |
| 30             | AN, BN  | 7,639                 | 2.3%                            |
| 31             | BN, D   | 9,082                 | 2.7%                            |
| 32             | AN, W   | 8,797                 | 2.8%                            |
| 33             | W, W  | -3,494                | -1.1%                           |
| 34             | D, C  | 535                   | 0.1%                            |
| 35             | C, C  | 7,301                 | 2.1%                            |
| 36             | D, BN   | 4,053                 | 1.1%                            |
| 37             | BN, AN  | 5,962                 | 1.9%                            |
| 38             | W, W  | -3,361                | -1.0%                           |
| 39             | BN, D   | 1,085                 | 0.3%                            |
| 40             | D, C  | 2,188                 | 0.6%                            |
| 41             | C, C  | 40,359                | 10.6%                           |
| 42             | C, C  | -4,536                | -1.2%                           |
| <b>Average</b> |   | <b>1,618</b>          | <b>0.4%</b>                     |
| <b>Maximum</b> |   | <b>40,359</b>         | <b>10.6%</b>                    |
| <b>Minimum</b> |   | <b>-10,756</b>        | <b>-3.3%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-110. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 5 (SR5) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -139                  | 0.0%                            |
| 2    | W, W  | -358                  | -0.1%                           |
| 3    | C, C  | 552                   | 0.1%                            |
| 4    | C, C  | 3,446                 | 0.6%                            |
| 5    | AN, W   | -2,518                | -0.5%                           |
| 6    | BN, AN  | -947                  | -0.2%                           |
| 7    | AN, W   | -354                  | -0.1%                           |
| 8    | D, D  | 156                   | 0.0%                            |
| 9    | W, W  | -163                  | 0.0%                            |
| 10   | W, W  | -774                  | -0.2%                           |
| 11   | W, AN   | -292                  | -0.1%                           |
| 12   | D, D  | 286                   | 0.1%                            |
| 13   | W, W  | -403                  | -0.1%                           |
| 14   | D, D  | 1,563                 | 0.3%                            |
| 15   | C, C  | 3,292                 | 0.7%                            |
| 16   | D, C  | -3,570                | -0.8%                           |
| 17   | C, C  | 223                   | 0.1%                            |
| 18   | C, C  | 3,231                 | 0.7%                            |
| 19   | C, C  | 4,696                 | 0.9%                            |
| 20   | AN, W   | -662                  | -0.2%                           |
| 21   | C, C  | 4,169                 | 0.9%                            |
| 22   | W, W  | 676                   | 0.2%                            |
| 23   | W, W  | -1,272                | -0.3%                           |
| 24   | W, W  | -316                  | -0.1%                           |
| 25   | W, W  | -205                  | -0.1%                           |
| 26   | W, AN   | 329                   | 0.1%                            |
| 27   | AN, AN  | -227                  | -0.1%                           |
| 28   | D, D  | 822                   | 0.2%                            |
| 29   | D, D  | 46                    | 0.0%                            |
| 30   | AN, BN  | -372                  | -0.1%                           |
| 31   | BN, D   | -230                  | -0.1%                           |
| 32   | AN, W   | -205                  | -0.1%                           |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -1,005                | -0.3%                           |
| 34             | D, C  | 250                   | 0.1%                            |
| 35             | C, C  | 1,796                 | 0.4%                            |
| 36             | D, BN   | -862                  | -0.2%                           |
| 37             | BN, AN  | 404                   | 0.1%                            |
| 38             | W, W  | -125                  | 0.0%                            |
| 39             | BN, D   | -334                  | -0.1%                           |
| 40             | D, C  | 2,704                 | 0.5%                            |
| 41             | C, C  | -121                  | 0.0%                            |
| 42             | C, C  | 18,148                | 3.1%                            |
| <b>Average</b> |   | <b>746</b>            | <b>0.1%</b>                     |
| <b>Maximum</b> |   | <b>18,148</b>         | <b>3.1%</b>                     |
| <b>Minimum</b> |   | <b>-3,570</b>         | <b>-0.8%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-111. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 6 (SR6) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -1,561                | -0.2%                           |
| 2    | W, W  | -1,174                | -0.2%                           |
| 3    | C, C  | -3,748                | -0.5%                           |
| 4    | C, C  | -1,628                | -0.2%                           |
| 5    | AN, W   | -1,256                | -0.2%                           |
| 6    | BN, AN  | -1,715                | -0.3%                           |
| 7    | AN, W   | -601                  | -0.1%                           |
| 8    | D, D  | -1,178                | -0.2%                           |
| 9    | W, W  | -68                   | 0.0%                            |
| 10   | W, W  | -2,281                | -0.4%                           |
| 11   | W, AN   | -1,731                | -0.2%                           |
| 12   | D, D  | -431                  | -0.1%                           |
| 13   | W, W  | -2,077                | -0.3%                           |
| 14   | D, D  | -3,787                | -0.5%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | -1,610                | -0.2%                           |
| 16             | D, C  | -10,273               | -1.2%                           |
| 17             | C, C  | -8,565                | -1.1%                           |
| 18             | C, C  | -4,919                | -0.6%                           |
| 19             | C, C  | 11,641                | 1.3%                            |
| 20             | AN, W   | -260                  | 0.0%                            |
| 21             | C, C  | -4,530                | -0.6%                           |
| 22             | W, W  | 767                   | 0.1%                            |
| 23             | W, W  | -1,466                | -0.2%                           |
| 24             | W, W  | -3,970                | -0.6%                           |
| 25             | W, W  | -1,563                | -0.3%                           |
| 26             | W, AN   | -3,326                | -0.5%                           |
| 27             | AN, AN  | -3,072                | -0.5%                           |
| 28             | D, D  | -2,045                | -0.3%                           |
| 29             | D, D  | -2,655                | -0.4%                           |
| 30             | AN, BN  | -4,024                | -0.6%                           |
| 31             | BN, D   | -1,194                | -0.2%                           |
| 32             | AN, W   | -422                  | -0.1%                           |
| 33             | W, W  | -1,286                | -0.2%                           |
| 34             | D, C  | -2,363                | -0.3%                           |
| 35             | C, C  | -1,051                | -0.1%                           |
| 36             | D, BN   | -21,609               | -2.6%                           |
| 37             | BN, AN  | -1,466                | -0.2%                           |
| 38             | W, W  | -2,384                | -0.4%                           |
| 39             | BN, D   | -4,780                | -0.6%                           |
| 40             | D, C  | -4,541                | -0.6%                           |
| 41             | C, C  | 2,398                 | 0.3%                            |
| 42             | C, C  | -3,297                | -0.4%                           |
| <b>Average</b> |   | <b>-2,502</b>         | <b>-0.3%</b>                    |
| <b>Maximum</b> |   | <b>11,641</b>         | <b>1.3%</b>                     |
| <b>Minimum</b> |   | <b>-21,609</b>        | <b>-2.6%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-112. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 7 (SR7) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 1,047                 | 0.3%                            |
| 2    | W, W  | 175                   | 0.0%                            |
| 3    | C, C  | 12,905                | 3.4%                            |
| 4    | C, C  | -1,151                | -0.3%                           |
| 5    | AN, W   | -372                  | -0.1%                           |
| 6    | BN, AN  | 13,159                | 3.6%                            |
| 7    | AN, W   | -155                  | 0.0%                            |
| 8    | D, D  | 12,222                | 3.2%                            |
| 9    | W, W  | -535                  | -0.2%                           |
| 10   | W, W  | 111                   | 0.0%                            |
| 11   | W, AN   | -21                   | 0.0%                            |
| 12   | D, D  | 554                   | 0.1%                            |
| 13   | W, W  | 570                   | 0.2%                            |
| 14   | D, D  | 14,237                | 3.7%                            |
| 15   | C, C  | 12,260                | 3.2%                            |
| 16   | D, C  | 12,448                | 3.2%                            |
| 17   | C, C  | 4,741                 | 1.3%                            |
| 18   | C, C  | 1,862                 | 0.5%                            |
| 19   | C, C  | 7,559                 | 1.9%                            |
| 20   | AN, W   | 270                   | 0.1%                            |
| 21   | C, C  | 11,606                | 3.0%                            |
| 22   | W, W  | -1,156                | -0.3%                           |
| 23   | W, W  | 136                   | 0.0%                            |
| 24   | W, W  | -421                  | -0.1%                           |
| 25   | W, W  | 2,762                 | 0.8%                            |
| 26   | W, AN   | 454                   | 0.1%                            |
| 27   | AN, AN  | 579                   | 0.1%                            |
| 28   | D, D  | 8,293                 | 2.1%                            |
| 29   | D, D  | -945                  | -0.2%                           |
| 30   | AN, BN  | 373                   | 0.1%                            |
| 31   | BN, D   | -1,047                | -0.3%                           |
| 32   | AN, W   | -1,527                | -0.4%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -553                  | -0.1%                           |
| 34             | D, C  | 369                   | 0.1%                            |
| 35             | C, C  | 11,099                | 2.8%                            |
| 36             | D, BN   | 9,766                 | 2.4%                            |
| 37             | BN, AN  | 379                   | 0.1%                            |
| 38             | W, W  | -477                  | -0.1%                           |
| 39             | BN, D   | 367                   | 0.1%                            |
| 40             | D, C  | 495                   | 0.1%                            |
| 41             | C, C  | -4,325                | -1.1%                           |
| 42             | C, C  | 10,721                | 2.6%                            |
| <b>Average</b> |   | <b>3,306</b>          | <b>0.9%</b>                     |
| <b>Maximum</b> |   | <b>14,237</b>         | <b>3.7%</b>                     |
| <b>Minimum</b> |   | <b>-4,325</b>         | <b>-1.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-113. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 8 (SR8) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -200                  | 0.0%                            |
| 2    | W, W  | 4,133                 | 0.5%                            |
| 3    | C, C  | -356                  | 0.0%                            |
| 4    | C, C  | 0                     | 0.0%                            |
| 5    | AN, W   | 3,871                 | 0.4%                            |
| 6    | BN, AN  | 3,739                 | 0.4%                            |
| 7    | AN, W   | 4,465                 | 0.5%                            |
| 8    | D, D  | 46                    | 0.0%                            |
| 9    | W, W  | 383                   | 0.0%                            |
| 10   | W, W  | -29                   | 0.0%                            |
| 11   | W, AN   | 477                   | 0.1%                            |
| 12   | D, D  | -297                  | 0.0%                            |
| 13   | W, W  | 66                    | 0.0%                            |
| 14   | D, D  | 76                    | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 365                   | 0.0%                            |
| 16             | D, C  | 212                   | 0.0%                            |
| 17             | C, C  | -9                    | 0.0%                            |
| 18             | C, C  | -283                  | 0.0%                            |
| 19             | C, C  | 390                   | 0.0%                            |
| 20             | AN, W   | -62                   | 0.0%                            |
| 21             | C, C  | -965                  | -0.1%                           |
| 22             | W, W  | 186                   | 0.0%                            |
| 23             | W, W  | -171                  | 0.0%                            |
| 24             | W, W  | -1,294                | -0.1%                           |
| 25             | W, W  | 129                   | 0.0%                            |
| 26             | W, AN   | 3,979                 | 0.5%                            |
| 27             | AN, AN  | 111                   | 0.0%                            |
| 28             | D, D  | 17                    | 0.0%                            |
| 29             | D, D  | 188                   | 0.0%                            |
| 30             | AN, BN  | 213                   | 0.0%                            |
| 31             | BN, D   | -77                   | 0.0%                            |
| 32             | AN, W   | -595                  | -0.1%                           |
| 33             | W, W  | -836                  | -0.1%                           |
| 34             | D, C  | 455                   | 0.0%                            |
| 35             | C, C  | -762                  | -0.1%                           |
| 36             | D, BN   | 207                   | 0.0%                            |
| 37             | BN, AN  | 66                    | 0.0%                            |
| 38             | W, W  | 346                   | 0.0%                            |
| 39             | BN, D   | 671                   | 0.1%                            |
| 40             | D, C  | 490                   | 0.0%                            |
| 41             | C, C  | -202                  | 0.0%                            |
| 42             | C, C  | 14                    | 0.0%                            |
| <b>Average</b> |   | <b>456</b>            | <b>0.1%</b>                     |
| <b>Maximum</b> |   | <b>4,465</b>          | <b>0.5%</b>                     |
| <b>Minimum</b> |   | <b>-1,294</b>         | <b>-0.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-114. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 9 (SR9) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 487                   | 0.1%                            |
| 2    | W, W  | 603                   | 0.1%                            |
| 3    | C, C  | 993                   | 0.2%                            |
| 4    | C, C  | 444                   | 0.1%                            |
| 5    | AN, W   | 1,931                 | 0.4%                            |
| 6    | BN, AN  | 1,228                 | 0.2%                            |
| 7    | AN, W   | 1,596                 | 0.3%                            |
| 8    | D, D  | 2,004                 | 0.4%                            |
| 9    | W, W  | 368                   | 0.1%                            |
| 10   | W, W  | 371                   | 0.1%                            |
| 11   | W, AN   | -590                  | -0.1%                           |
| 12   | D, D  | 1,861                 | 0.3%                            |
| 13   | W, W  | 353                   | 0.1%                            |
| 14   | D, D  | 1,618                 | 0.3%                            |
| 15   | C, C  | 2,627                 | 0.5%                            |
| 16   | D, C  | 1,651                 | 0.3%                            |
| 17   | C, C  | -1,248                | -0.2%                           |
| 18   | C, C  | -976                  | -0.2%                           |
| 19   | C, C  | -1,482                | -0.3%                           |
| 20   | AN, W   | -2,285                | -0.5%                           |
| 21   | C, C  | 2,508                 | 0.4%                            |
| 22   | W, W  | 814                   | 0.2%                            |
| 23   | W, W  | 250                   | 0.0%                            |
| 24   | W, W  | -3,187                | -0.6%                           |
| 25   | W, W  | 45                    | 0.0%                            |
| 26   | W, AN   | -247                  | -0.1%                           |
| 27   | AN, AN  | 1,814                 | 0.3%                            |
| 28   | D, D  | 2,220                 | 0.4%                            |
| 29   | D, D  | 2,185                 | 0.4%                            |
| 30   | AN, BN  | 2,183                 | 0.4%                            |
| 31   | BN, D   | 1,158                 | 0.2%                            |
| 32   | AN, W   | 1,317                 | 0.3%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -279                  | -0.1%                           |
| 34             | D, C  | 1,767                 | 0.3%                            |
| 35             | C, C  | 2,425                 | 0.5%                            |
| 36             | D, BN   | 1,615                 | 0.3%                            |
| 37             | BN, AN  | 2,201                 | 0.5%                            |
| 38             | W, W  | 125                   | 0.0%                            |
| 39             | BN, D   | 315                   | 0.1%                            |
| 40             | D, C  | 4,564                 | 0.8%                            |
| 41             | C, C  | 181                   | 0.0%                            |
| 42             | C, C  | -1,226                | -0.2%                           |
| <b>Average</b> |   | <b>817</b>            | <b>0.2%</b>                     |
| <b>Maximum</b> |   | <b>4,564</b>          | <b>0.8%</b>                     |
| <b>Minimum</b> |   | <b>-3,187</b>         | <b>-0.6%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-115. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 10 (SR10) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 12,810                | 4.4%                            |
| 2    | W, W  | 15,344                | 4.1%                            |
| 3    | C, C  | 11,166                | 2.2%                            |
| 4    | C, C  | -97,978               | -12.1%                          |
| 5    | AN, W   | 25,098                | 6.8%                            |
| 6    | BN, AN  | 17,876                | 4.4%                            |
| 7    | AN, W   | 29,158                | 9.6%                            |
| 8    | D, D  | 26,306                | 5.9%                            |
| 9    | W, W  | 913                   | 0.3%                            |
| 10   | W, W  | 47                    | 0.0%                            |
| 11   | W, AN   | -7,637                | -2.5%                           |
| 12   | D, D  | 24,031                | 5.4%                            |
| 13   | W, W  | 6,848                 | 2.2%                            |
| 14   | D, D  | 21,698                | 4.8%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 32,658                | 6.2%                            |
| 16             | D, C  | 15,276                | 2.8%                            |
| 17             | C, C  | -13,203               | -2.1%                           |
| 18             | C, C  | -18,805               | -2.4%                           |
| 19             | C, C  | -12,144               | -1.6%                           |
| 20             | AN, W   | -13,025               | -3.1%                           |
| 21             | C, C  | 30,782                | 5.6%                            |
| 22             | W, W  | 8,198                 | 2.4%                            |
| 23             | W, W  | 1,268                 | 0.4%                            |
| 24             | W, W  | -11,364               | -3.7%                           |
| 25             | W, W  | 283                   | 0.1%                            |
| 26             | W, AN   | -3,158                | -1.1%                           |
| 27             | AN, AN  | 29,107                | 7.4%                            |
| 28             | D, D  | 24,873                | 5.4%                            |
| 29             | D, D  | 24,903                | 5.3%                            |
| 30             | AN, BN  | 25,039                | 5.8%                            |
| 31             | BN, D   | 22,905                | 4.9%                            |
| 32             | AN, W   | 16,467                | 5.4%                            |
| 33             | W, W  | -2,860                | -1.0%                           |
| 34             | D, C  | 16,814                | 4.0%                            |
| 35             | C, C  | 28,860                | 6.0%                            |
| 36             | D, BN   | 20,983                | 3.7%                            |
| 37             | BN, AN  | 22,701                | 5.3%                            |
| 38             | W, W  | 3,055                 | 1.1%                            |
| 39             | BN, D   | -2,569                | -0.7%                           |
| 40             | D, C  | 44,299                | 9.8%                            |
| 41             | C, C  | -64,140               | -8.3%                           |
| 42             | C, C  | -14,255               | -2.0%                           |
| <b>Average</b> |   | <b>7,110</b>          | <b>2.2%</b>                     |
| <b>Maximum</b> |   | <b>44,299</b>         | <b>9.8%</b>                     |
| <b>Minimum</b> |   | <b>-97,978</b>        | <b>-12.1%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-116. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 11 (SR11) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -10                   | 0.0%                            |
| 2    | W, W  | -3                    | 0.0%                            |
| 3    | C, C  | -3,205                | -0.8%                           |
| 4    | C, C  | -62                   | 0.0%                            |
| 5    | AN, W   | 13                    | 0.0%                            |
| 6    | BN, AN  | 39                    | 0.0%                            |
| 7    | AN, W   | 84                    | 0.0%                            |
| 8    | D, D  | -3,273                | -0.9%                           |
| 9    | W, W  | -48                   | 0.0%                            |
| 10   | W, W  | 0                     | 0.0%                            |
| 11   | W, AN   | 5                     | 0.0%                            |
| 12   | D, D  | -10                   | 0.0%                            |
| 13   | W, W  | 42                    | 0.0%                            |
| 14   | D, D  | -21                   | 0.0%                            |
| 15   | C, C  | -62                   | 0.0%                            |
| 16   | D, C  | 23                    | 0.0%                            |
| 17   | C, C  | -142                  | 0.0%                            |
| 18   | C, C  | 194                   | 0.0%                            |
| 19   | C, C  | -134                  | 0.0%                            |
| 20   | AN, W   | -3,919                | -1.1%                           |
| 21   | C, C  | 318                   | 0.1%                            |
| 22   | W, W  | 456                   | 0.2%                            |
| 23   | W, W  | 212                   | 0.1%                            |
| 24   | W, W  | 9,825                 | 3.0%                            |
| 25   | W, W  | 7,494                 | 3.0%                            |
| 26   | W, AN   | 96                    | 0.0%                            |
| 27   | AN, AN  | 22                    | 0.0%                            |
| 28   | D, D  | 111                   | 0.0%                            |
| 29   | D, D  | 26                    | 0.0%                            |
| 30   | AN, BN  | 38                    | 0.0%                            |
| 31   | BN, D   | -96                   | 0.0%                            |
| 32   | AN, W   | 12,292                | 4.6%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 131                   | 0.0%                            |
| 34             | D, C  | -70                   | 0.0%                            |
| 35             | C, C  | 39                    | 0.0%                            |
| 36             | D, BN   | -230                  | -0.1%                           |
| 37             | BN, AN  | -16                   | 0.0%                            |
| 38             | W, W  | 55                    | 0.0%                            |
| 39             | BN, D   | -92                   | 0.0%                            |
| 40             | D, C  | 405                   | 0.1%                            |
| 41             | C, C  | -209                  | 0.0%                            |
| 42             | C, C  | -401                  | -0.1%                           |
| <b>Average</b> |   | <b>474</b>            | <b>0.2%</b>                     |
| <b>Maximum</b> |   | <b>12,292</b>         | <b>4.6%</b>                     |
| <b>Minimum</b> |   | <b>-3,919</b>         | <b>-1.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-117. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 12 (SR12) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 57                    | 0.0%                            |
| 2    | W, W  | 154                   | 0.0%                            |
| 3    | C, C  | 6                     | 0.0%                            |
| 4    | C, C  | 83                    | 0.0%                            |
| 5    | AN, W   | 45                    | 0.0%                            |
| 6    | BN, AN  | 6                     | 0.0%                            |
| 7    | AN, W   | 30                    | 0.0%                            |
| 8    | D, D  | 12                    | 0.0%                            |
| 9    | W, W  | -76                   | 0.0%                            |
| 10   | W, W  | -158                  | 0.0%                            |
| 11   | W, AN   | -143                  | 0.0%                            |
| 12   | D, D  | -417                  | -0.1%                           |
| 13   | W, W  | 93                    | 0.0%                            |
| 14   | D, D  | -40                   | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | -220                  | 0.0%                            |
| 16             | D, C  | 207                   | 0.0%                            |
| 17             | C, C  | -469                  | -0.1%                           |
| 18             | C, C  | -226                  | 0.0%                            |
| 19             | C, C  | -27                   | 0.0%                            |
| 20             | AN, W   | -11,527               | -1.9%                           |
| 21             | C, C  | 2,805                 | 0.4%                            |
| 22             | W, W  | 947                   | 0.2%                            |
| 23             | W, W  | -276                  | -0.1%                           |
| 24             | W, W  | -20                   | 0.0%                            |
| 25             | W, W  | -95                   | 0.0%                            |
| 26             | W, AN   | 5                     | 0.0%                            |
| 27             | AN, AN  | 94                    | 0.0%                            |
| 28             | D, D  | 31                    | 0.0%                            |
| 29             | D, D  | -33                   | 0.0%                            |
| 30             | AN, BN  | 45                    | 0.0%                            |
| 31             | BN, D   | -116                  | 0.0%                            |
| 32             | AN, W   | 120                   | 0.0%                            |
| 33             | W, W  | 20                    | 0.0%                            |
| 34             | D, C  | -56                   | 0.0%                            |
| 35             | C, C  | 100                   | 0.0%                            |
| 36             | D, BN   | -16                   | 0.0%                            |
| 37             | BN, AN  | 43                    | 0.0%                            |
| 38             | W, W  | 29                    | 0.0%                            |
| 39             | BN, D   | -276                  | 0.0%                            |
| 40             | D, C  | -72                   | 0.0%                            |
| 41             | C, C  | -215                  | 0.0%                            |
| 42             | C, C  | 193                   | 0.0%                            |
| <b>Average</b> |   | <b>-223</b>           | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>2,805</b>          | <b>0.4%</b>                     |
| <b>Minimum</b> |   | <b>-11,527</b>        | <b>-1.9%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-118. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 13 (SR13) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 125                   | 0.0%                            |
| 2    | W, W  | -396                  | 0.0%                            |
| 3    | C, C  | -337                  | 0.0%                            |
| 4    | C, C  | -9,602                | -0.4%                           |
| 5    | AN, W   | -12,187               | -0.7%                           |
| 6    | BN, AN  | 342                   | 0.0%                            |
| 7    | AN, W   | -452                  | 0.0%                            |
| 8    | D, D  | 244                   | 0.0%                            |
| 9    | W, W  | 126                   | 0.0%                            |
| 10   | W, W  | 84                    | 0.0%                            |
| 11   | W, AN   | 3,341                 | 0.2%                            |
| 12   | D, D  | -4,023                | -0.2%                           |
| 13   | W, W  | -238                  | 0.0%                            |
| 14   | D, D  | -109                  | 0.0%                            |
| 15   | C, C  | -960                  | 0.0%                            |
| 16   | D, C  | 244                   | 0.0%                            |
| 17   | C, C  | -1,002                | 0.0%                            |
| 18   | C, C  | -2,676                | -0.1%                           |
| 19   | C, C  | -34                   | 0.0%                            |
| 20   | AN, W   | -292                  | 0.0%                            |
| 21   | C, C  | 77                    | 0.0%                            |
| 22   | W, W  | 154                   | 0.0%                            |
| 23   | W, W  | 496                   | 0.0%                            |
| 24   | W, W  | -544                  | 0.0%                            |
| 25   | W, W  | -478                  | 0.0%                            |
| 26   | W, AN   | 160                   | 0.0%                            |
| 27   | AN, AN  | -379                  | 0.0%                            |
| 28   | D, D  | 182                   | 0.0%                            |
| 29   | D, D  | -542                  | 0.0%                            |
| 30   | AN, BN  | -754                  | 0.0%                            |
| 31   | BN, D   | -732                  | 0.0%                            |
| 32   | AN, W   | -1,374                | -0.1%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 204                   | 0.0%                            |
| 34             | D, C  | 194                   | 0.0%                            |
| 35             | C, C  | -334                  | 0.0%                            |
| 36             | D, BN   | -499                  | 0.0%                            |
| 37             | BN, AN  | -639                  | 0.0%                            |
| 38             | W, W  | 316                   | 0.0%                            |
| 39             | BN, D   | -416                  | 0.0%                            |
| 40             | D, C  | -1,139                | -0.1%                           |
| 41             | C, C  | -7,661                | -0.3%                           |
| 42             | C, C  | -1,324                | -0.1%                           |
| <b>Average</b> |   | <b>-1,020</b>         | <b>-0.1%</b>                    |
| <b>Maximum</b> |   | <b>3,341</b>          | <b>0.2%</b>                     |
| <b>Minimum</b> |   | <b>-12,187</b>        | <b>-0.7%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-119. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 14 (SR14) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -2,519                | -1.2%                           |
| 2    | W, W  | 14,093                | 4.2%                            |
| 3    | C, C  | 38,775                | 5.9%                            |
| 4    | C, C  | 20,978                | 1.7%                            |
| 5    | AN, W   | 67,646                | 17.4%                           |
| 6    | BN, AN  | 43,511                | 9.1%                            |
| 7    | AN, W   | 59,854                | 24.4%                           |
| 8    | D, D  | 57,225                | 12.2%                           |
| 9    | W, W  | 19,700                | 6.7%                            |
| 10   | W, W  | 11,158                | 6.6%                            |
| 11   | W, AN   | 5,539                 | 2.9%                            |
| 12   | D, D  | 56,448                | 11.3%                           |
| 13   | W, W  | 13,195                | 5.2%                            |
| 14   | D, D  | 57,444                | 11.3%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 97,437                | 13.5%                           |
| 16             | D, C  | 28,007                | 3.7%                            |
| 17             | C, C  | -35,721               | -3.3%                           |
| 18             | C, C  | -17,119               | -1.3%                           |
| 19             | C, C  | -37,610               | -2.9%                           |
| 20             | AN, W   | -46,376               | -7.6%                           |
| 21             | C, C  | 99,082                | 12.3%                           |
| 22             | W, W  | 33,758                | 9.7%                            |
| 23             | W, W  | 23,160                | 8.3%                            |
| 24             | W, W  | -23,945               | -9.1%                           |
| 25             | W, W  | 12,597                | 6.0%                            |
| 26             | W, AN   | 11,648                | 4.8%                            |
| 27             | AN, AN  | 67,675                | 11.5%                           |
| 28             | D, D  | 52,804                | 6.9%                            |
| 29             | D, D  | 60,438                | 7.6%                            |
| 30             | AN, BN  | 70,040                | 10.8%                           |
| 31             | BN, D   | 101,356               | 14.1%                           |
| 32             | AN, W   | 34,242                | 9.8%                            |
| 33             | W, W  | 13,208                | 6.0%                            |
| 34             | D, C  | 45,490                | 7.6%                            |
| 35             | C, C  | 70,727                | 8.2%                            |
| 36             | D, BN   | 62,420                | 5.2%                            |
| 37             | BN, AN  | 56,774                | 7.1%                            |
| 38             | W, W  | 10,867                | 3.8%                            |
| 39             | BN, D   | -14,878               | -3.4%                           |
| 40             | D, C  | 89,103                | 11.4%                           |
| 41             | C, C  | 36,357                | 3.0%                            |
| 42             | C, C  | -39,549               | -2.9%                           |
| <b>Average</b> |   | <b>31,549</b>         | <b>6.2%</b>                     |
| <b>Maximum</b> |   | <b>101,356</b>        | <b>24.4%</b>                    |
| <b>Minimum</b> |   | <b>-46,376</b>        | <b>-9.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-120. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 15 (SR15) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 5,804                 | 0.4%                            |
| 2    | W, W  | 4,790                 | 0.3%                            |
| 3    | C, C  | -12,360               | -0.7%                           |
| 4    | C, C  | -14,570               | -0.8%                           |
| 5    | AN, W   | 3,723                 | 0.3%                            |
| 6    | BN, AN  | 10,832                | 0.8%                            |
| 7    | AN, W   | 6,428                 | 0.5%                            |
| 8    | D, D  | 4,852                 | 0.3%                            |
| 9    | W, W  | -5,807                | -0.5%                           |
| 10   | W, W  | -66                   | 0.0%                            |
| 11   | W, AN   | -424                  | 0.0%                            |
| 12   | D, D  | 4,883                 | 0.3%                            |
| 13   | W, W  | 1,742                 | 0.1%                            |
| 14   | D, D  | 2,332                 | 0.1%                            |
| 15   | C, C  | 2,939                 | 0.2%                            |
| 16   | D, C  | 3,322                 | 0.2%                            |
| 17   | C, C  | -10,959               | -0.6%                           |
| 18   | C, C  | 3,610                 | 0.2%                            |
| 19   | C, C  | -3,636                | -0.2%                           |
| 20   | AN, W   | 229                   | 0.0%                            |
| 21   | C, C  | 7,350                 | 0.4%                            |
| 22   | W, W  | -172                  | 0.0%                            |
| 23   | W, W  | -8,072                | -0.6%                           |
| 24   | W, W  | -3,021                | -0.2%                           |
| 25   | W, W  | -996                  | -0.1%                           |
| 26   | W, AN   | 1,984                 | 0.1%                            |
| 27   | AN, AN  | 1,098                 | 0.1%                            |
| 28   | D, D  | 11,634                | 0.7%                            |
| 29   | D, D  | 3,771                 | 0.2%                            |
| 30   | AN, BN  | 4,152                 | 0.3%                            |
| 31   | BN, D   | -701                  | 0.0%                            |
| 32   | AN, W   | 1,496                 | 0.1%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 3,880                 | 0.3%                            |
| 34             | D, C  | -513                  | 0.0%                            |
| 35             | C, C  | 4,503                 | 0.3%                            |
| 36             | D, BN   | 13,690                | 0.8%                            |
| 37             | BN, AN  | 3,778                 | 0.2%                            |
| 38             | W, W  | -5,909                | -0.5%                           |
| 39             | BN, D   | 20                    | 0.0%                            |
| 40             | D, C  | 10,269                | 0.5%                            |
| 41             | C, C  | -1,829                | -0.1%                           |
| 42             | C, C  | -4,729                | -0.2%                           |
| <b>Average</b> |   | <b>1,175</b>          | <b>0.1%</b>                     |
| <b>Maximum</b> |   | <b>13,690</b>         | <b>0.8%</b>                     |
| <b>Minimum</b> |   | <b>-14,570</b>        | <b>-0.8%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-121. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 16 (SR16) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 0                     | 0.0%                            |
| 2    | W, W  | -1                    | 0.0%                            |
| 3    | C, C  | -80                   | 0.0%                            |
| 4    | C, C  | 154                   | 0.1%                            |
| 5    | AN, W   | -68                   | -0.1%                           |
| 6    | BN, AN  | 0                     | 0.0%                            |
| 7    | AN, W   | -56                   | -0.1%                           |
| 8    | D, D  | -23                   | 0.0%                            |
| 9    | W, W  | 87                    | 0.1%                            |
| 10   | W, W  | -33                   | -0.1%                           |
| 11   | W, AN   | 7                     | 0.0%                            |
| 12   | D, D  | -10                   | 0.0%                            |
| 13   | W, W  | 102                   | 0.1%                            |
| 14   | D, D  | 41                    | 0.0%                            |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 47                    | 0.0%                            |
| 16             | D, C  | -21                   | 0.0%                            |
| 17             | C, C  | 31                    | 0.0%                            |
| 18             | C, C  | 158                   | 0.1%                            |
| 19             | C, C  | 18                    | 0.0%                            |
| 20             | AN, W   | -153                  | -0.2%                           |
| 21             | C, C  | 22                    | 0.0%                            |
| 22             | W, W  | 20                    | 0.0%                            |
| 23             | W, W  | 0                     | 0.0%                            |
| 24             | W, W  | -29                   | -0.1%                           |
| 25             | W, W  | -20                   | 0.0%                            |
| 26             | W, AN   | 0                     | 0.0%                            |
| 27             | AN, AN  | -14                   | 0.0%                            |
| 28             | D, D  | -26                   | 0.0%                            |
| 29             | D, D  | -30                   | 0.0%                            |
| 30             | AN, BN  | 117                   | 0.1%                            |
| 31             | BN, D   | -34                   | 0.0%                            |
| 32             | AN, W   | 0                     | 0.0%                            |
| 33             | W, W  | 39                    | 0.1%                            |
| 34             | D, C  | 38                    | 0.0%                            |
| 35             | C, C  | 11                    | 0.0%                            |
| 36             | D, BN   | 58                    | 0.0%                            |
| 37             | BN, AN  | -74                   | 0.0%                            |
| 38             | W, W  | -5                    | 0.0%                            |
| 39             | BN, D   | -61                   | 0.0%                            |
| 40             | D, C  | 31                    | 0.0%                            |
| 41             | C, C  | 118                   | 0.0%                            |
| 42             | C, C  | 0                     | 0.0%                            |
| <b>Average</b> |   | <b>9</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>158</b>            | <b>0.1%</b>                     |
| <b>Minimum</b> |   | <b>-153</b>           | <b>-0.2%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-122. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 17 (SR17) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 23                    | 0.0%                            |
| 2    | W, W  | 5                     | 0.0%                            |
| 3    | C, C  | -26                   | 0.0%                            |
| 4    | C, C  | 9                     | 0.0%                            |
| 5    | AN, W   | -15                   | 0.0%                            |
| 6    | BN, AN  | -24                   | 0.0%                            |
| 7    | AN, W   | -47                   | 0.0%                            |
| 8    | D, D  | -45                   | 0.0%                            |
| 9    | W, W  | 11                    | 0.0%                            |
| 10   | W, W  | 2                     | 0.0%                            |
| 11   | W, AN   | 151                   | 0.1%                            |
| 12   | D, D  | -98                   | 0.0%                            |
| 13   | W, W  | -138                  | -0.1%                           |
| 14   | D, D  | 112                   | 0.0%                            |
| 15   | C, C  | -123                  | 0.0%                            |
| 16   | D, C  | 6                     | 0.0%                            |
| 17   | C, C  | 16                    | 0.0%                            |
| 18   | C, C  | 45                    | 0.0%                            |
| 19   | C, C  | 54                    | 0.0%                            |
| 20   | AN, W   | -13                   | 0.0%                            |
| 21   | C, C  | -12                   | 0.0%                            |
| 22   | W, W  | 2                     | 0.0%                            |
| 23   | W, W  | -42                   | 0.0%                            |
| 24   | W, W  | 63                    | 0.0%                            |
| 25   | W, W  | -11                   | 0.0%                            |
| 26   | W, AN   | -11                   | 0.0%                            |
| 27   | AN, AN  | -49                   | 0.0%                            |
| 28   | D, D  | 77                    | 0.0%                            |
| 29   | D, D  | -59                   | 0.0%                            |
| 30   | AN, BN  | -42                   | 0.0%                            |
| 31   | BN, D   | 29                    | 0.0%                            |
| 32   | AN, W   | 108                   | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 82                    | 0.0%                            |
| 34             | D, C  | -19                   | 0.0%                            |
| 35             | C, C  | -19                   | 0.0%                            |
| 36             | D, BN   | -66                   | 0.0%                            |
| 37             | BN, AN  | 104                   | 0.0%                            |
| 38             | W, W  | -11                   | 0.0%                            |
| 39             | BN, D   | 0                     | 0.0%                            |
| 40             | D, C  | 36                    | 0.0%                            |
| 41             | C, C  | 14                    | 0.0%                            |
| 42             | C, C  | 28                    | 0.0%                            |
| <b>Average</b> |   | <b>3</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>151</b>            | <b>0.1%</b>                     |
| <b>Minimum</b> |   | <b>-138</b>           | <b>-0.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-123. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 18 (SR18) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -105                  | 0.0%                            |
| 2    | W, W  | 10                    | 0.0%                            |
| 3    | C, C  | -150                  | 0.0%                            |
| 4    | C, C  | 1,500                 | 0.1%                            |
| 5    | AN, W   | 295                   | 0.0%                            |
| 6    | BN, AN  | 156                   | 0.0%                            |
| 7    | AN, W   | 21                    | 0.0%                            |
| 8    | D, D  | 305                   | 0.0%                            |
| 9    | W, W  | 110                   | 0.0%                            |
| 10   | W, W  | 1                     | 0.0%                            |
| 11   | W, AN   | 4,647                 | 0.4%                            |
| 12   | D, D  | -4,251                | -0.3%                           |
| 13   | W, W  | -499                  | 0.0%                            |
| 14   | D, D  | 49                    | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 1,261                 | 0.1%                            |
| 16             | D, C  | 279                   | 0.0%                            |
| 17             | C, C  | -183                  | 0.0%                            |
| 18             | C, C  | 2,117                 | 0.1%                            |
| 19             | C, C  | -493                  | 0.0%                            |
| 20             | AN, W   | -168                  | 0.0%                            |
| 21             | C, C  | 955                   | 0.1%                            |
| 22             | W, W  | -50                   | 0.0%                            |
| 23             | W, W  | -21                   | 0.0%                            |
| 24             | W, W  | -100                  | 0.0%                            |
| 25             | W, W  | -121                  | 0.0%                            |
| 26             | W, AN   | -95                   | 0.0%                            |
| 27             | AN, AN  | -203                  | 0.0%                            |
| 28             | D, D  | -65                   | 0.0%                            |
| 29             | D, D  | 79                    | 0.0%                            |
| 30             | AN, BN  | -114                  | 0.0%                            |
| 31             | BN, D   | -54                   | 0.0%                            |
| 32             | AN, W   | -104                  | 0.0%                            |
| 33             | W, W  | -132                  | 0.0%                            |
| 34             | D, C  | 34                    | 0.0%                            |
| 35             | C, C  | -65                   | 0.0%                            |
| 36             | D, BN   | 7                     | 0.0%                            |
| 37             | BN, AN  | -21                   | 0.0%                            |
| 38             | W, W  | -204                  | 0.0%                            |
| 39             | BN, D   | 213                   | 0.0%                            |
| 40             | D, C  | -92                   | 0.0%                            |
| 41             | C, C  | 76                    | 0.0%                            |
| 42             | C, C  | 164                   | 0.0%                            |
| <b>Average</b> |   | <b>119</b>            | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>4,647</b>          | <b>0.4%</b>                     |
| <b>Minimum</b> |   | <b>-4,251</b>         | <b>-0.3%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-124. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 19 (SR19) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -57                   | 0.0%                            |
| 2    | W, W  | -43                   | 0.0%                            |
| 3    | C, C  | -7                    | 0.0%                            |
| 4    | C, C  | 0                     | 0.0%                            |
| 5    | AN, W   | 0                     | 0.0%                            |
| 6    | BN, AN  | 0                     | 0.0%                            |
| 7    | AN, W   | 22                    | 0.0%                            |
| 8    | D, D  | 0                     | 0.0%                            |
| 9    | W, W  | 0                     | 0.0%                            |
| 10   | W, W  | 0                     | 0.0%                            |
| 11   | W, AN   | 74                    | 0.0%                            |
| 12   | D, D  | 9                     | 0.0%                            |
| 13   | W, W  | -29                   | 0.0%                            |
| 14   | D, D  | -26                   | 0.0%                            |
| 15   | C, C  | 53                    | 0.0%                            |
| 16   | D, C  | -18                   | 0.0%                            |
| 17   | C, C  | 0                     | 0.0%                            |
| 18   | C, C  | 37                    | 0.0%                            |
| 19   | C, C  | 0                     | 0.0%                            |
| 20   | AN, W   | 0                     | 0.0%                            |
| 21   | C, C  | 0                     | 0.0%                            |
| 22   | W, W  | 0                     | 0.0%                            |
| 23   | W, W  | 30                    | 0.0%                            |
| 24   | W, W  | 144                   | 0.1%                            |
| 25   | W, W  | 45                    | 0.0%                            |
| 26   | W, AN   | -26                   | 0.0%                            |
| 27   | AN, AN  | 0                     | 0.0%                            |
| 28   | D, D  | 26                    | 0.0%                            |
| 29   | D, D  | -1                    | 0.0%                            |
| 30   | AN, BN  | -6                    | 0.0%                            |
| 31   | BN, D   | 0                     | 0.0%                            |
| 32   | AN, W   | 0                     | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 0                     | 0.0%                            |
| 34             | D, C  | -12                   | 0.0%                            |
| 35             | C, C  | 0                     | 0.0%                            |
| 36             | D, BN   | -10                   | 0.0%                            |
| 37             | BN, AN  | 0                     | 0.0%                            |
| 38             | W, W  | 0                     | 0.0%                            |
| 39             | BN, D   | 0                     | 0.0%                            |
| 40             | D, C  | 0                     | 0.0%                            |
| 41             | C, C  | 0                     | 0.0%                            |
| 42             | C, C  | -57                   | 0.0%                            |
| <b>Average</b> |   | <b>5</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>144</b>            | <b>0.1%</b>                     |
| <b>Minimum</b> |   | <b>-57</b>            | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-125. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 20 (SR20) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 0                     | 0.0%                            |
| 2    | W, W  | 0                     | 0.0%                            |
| 3    | C, C  | 0                     | 0.0%                            |
| 4    | C, C  | 4                     | 0.0%                            |
| 5    | AN, W   | 2                     | 0.0%                            |
| 6    | BN, AN  | 2                     | 0.0%                            |
| 7    | AN, W   | -2                    | 0.0%                            |
| 8    | D, D  | 0                     | 0.0%                            |
| 9    | W, W  | 0                     | 0.0%                            |
| 10   | W, W  | 0                     | 0.0%                            |
| 11   | W, AN   | 2                     | 0.0%                            |
| 12   | D, D  | -2                    | 0.0%                            |
| 13   | W, W  | 0                     | 0.0%                            |
| 14   | D, D  | 2                     | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | -12                   | 0.0%                            |
| 16             | D, C  | 105                   | 0.0%                            |
| 17             | C, C  | 36                    | 0.0%                            |
| 18             | C, C  | 3                     | 0.0%                            |
| 19             | C, C  | 6                     | 0.0%                            |
| 20             | AN, W   | -15                   | 0.0%                            |
| 21             | C, C  | 00                    | 0.0%                            |
| 22             | W, W  | -6                    | 0.0%                            |
| 23             | W, W  | -3                    | 0.0%                            |
| 24             | W, W  | 5                     | 0.0%                            |
| 25             | W, W  | -13                   | 0.0%                            |
| 26             | W, AN   | 0                     | 0.0%                            |
| 27             | AN, AN  | 0                     | 0.0%                            |
| 28             | D, D  | 0                     | 0.0%                            |
| 29             | D, D  | 0                     | 0.0%                            |
| 30             | AN, BN  | -1                    | 0.0%                            |
| 31             | BN, D   | 112                   | 0.0%                            |
| 32             | AN, W   | 24                    | 0.0%                            |
| 33             | W, W  | -71                   | 0.0%                            |
| 34             | D, C  | 14                    | 0.0%                            |
| 35             | C, C  | 16                    | 0.0%                            |
| 36             | D, BN   | -2                    | 0.0%                            |
| 37             | BN, AN  | 15                    | 0.0%                            |
| 38             | W, W  | -35                   | 0.0%                            |
| 39             | BN, D   | -1                    | 0.0%                            |
| 40             | D, C  | -1                    | 0.0%                            |
| 41             | C, C  | 13                    | 0.0%                            |
| 42             | C, C  | -5                    | 0.0%                            |
| <b>Average</b> |   | <b>5</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>112</b>            | <b>0.0%</b>                     |
| <b>Minimum</b> |   | <b>-71</b>            | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-126. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 21 (SR21) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -48                   | 0.0%                            |
| 2    | W, W  | -1                    | 0.0%                            |
| 3    | C, C  | -46                   | 0.0%                            |
| 4    | C, C  | -23                   | 0.0%                            |
| 5    | AN, W   | 78                    | 0.0%                            |
| 6    | BN, AN  | 17                    | 0.0%                            |
| 7    | AN, W   | -4                    | 0.0%                            |
| 8    | D, D  | 12                    | 0.0%                            |
| 9    | W, W  | -25                   | 0.0%                            |
| 10   | W, W  | -15                   | 0.0%                            |
| 11   | W, AN   | 8                     | 0.0%                            |
| 12   | D, D  | -10                   | 0.0%                            |
| 13   | W, W  | 0                     | 0.0%                            |
| 14   | D, D  | 41                    | 0.0%                            |
| 15   | C, C  | 9                     | 0.0%                            |
| 16   | D, C  | 119                   | 0.0%                            |
| 17   | C, C  | -108                  | 0.0%                            |
| 18   | C, C  | 58                    | 0.0%                            |
| 19   | C, C  | 68                    | 0.0%                            |
| 20   | AN, W   | 43                    | 0.0%                            |
| 21   | C, C  | -120                  | 0.0%                            |
| 22   | W, W  | 29                    | 0.0%                            |
| 23   | W, W  | 4                     | 0.0%                            |
| 24   | W, W  | -9                    | 0.0%                            |
| 25   | W, W  | 0                     | 0.0%                            |
| 26   | W, AN   | 33                    | 0.0%                            |
| 27   | AN, AN  | 83                    | 0.0%                            |
| 28   | D, D  | -12                   | 0.0%                            |
| 29   | D, D  | -2                    | 0.0%                            |
| 30   | AN, BN  | 18                    | 0.0%                            |
| 31   | BN, D   | 1                     | 0.0%                            |
| 32   | AN, W   | -106                  | 0.0%                            |
| 33   | W, W  | -6                    | 0.0%                            |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 34             | D, C  | -13                   | 0.0%                            |
| 35             | C, C  | 3                     | 0.0%                            |
| 36             | D, BN   | 32                    | 0.0%                            |
| 37             | BN, AN  | 85                    | 0.0%                            |
| 38             | W, W  | 134                   | 0.0%                            |
| 39             | BN, D   | -52                   | 0.0%                            |
| 40             | D, C  | 1                     | 0.0%                            |
| 41             | C, C  | 6                     | 0.0%                            |
| 42             | C, C  | 3                     | 0.0%                            |
| <b>Average</b> |   | <b>7</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>134</b>            | <b>0.0%</b>                     |
| <b>Minimum</b> |   | <b>-120</b>           | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

### I-1.1.7 Changes in Groundwater Pumping, Alternative 3 Compared to No Action Alternative

Table I.1-127 through Table I.1-147 provide the annual simulated groundwater pumping through the model simulation period for each of the 21 model subregions for Alternative 3 compared to the No Action Alternative.

Table I.1-127. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 1 (SR1) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 70                  | 0.1%                          |
| 2    | W, W  | 31                  | 0.1%                          |
| 3    | C, C  | 2,768               | 4.5%                          |
| 4    | C, C  | 27,344              | 35.8%                         |
| 5    | AN, W   | 3,721               | 6.2%                          |
| 6    | BN, AN  | -734                | -1.2%                         |
| 7    | AN, W   | -138                | -0.2%                         |
| 8    | D, D  | -224                | -0.4%                         |
| 9    | W, W  | 29                  | 0.1%                          |
| 10   | W, W  | 49                  | 0.1%                          |
| 11   | W, AN   | 82                  | 0.1%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 12             | D, D  | 296                 | 0.5%                          |
| 13             | W, W  | -91                 | -0.2%                         |
| 14             | D, D  | 7,474               | 10.4%                         |
| 15             | C, C  | 5,139               | 6.8%                          |
| 16             | D, C  | -63                 | -0.1%                         |
| 17             | C, C  | -102                | -0.1%                         |
| 18             | C, C  | 6,281               | 7.6%                          |
| 19             | C, C  | 3,397               | 3.9%                          |
| 20             | AN, W   | 350                 | 0.6%                          |
| 21             | C, C  | 7,411               | 10.4%                         |
| 22             | W, W  | 1,360               | 2.1%                          |
| 23             | W, W  | -98                 | -0.2%                         |
| 24             | W, W  | -42                 | -0.1%                         |
| 25             | W, W  | -128                | -0.2%                         |
| 26             | W, AN   | -130                | -0.2%                         |
| 27             | AN, AN  | -173                | -0.3%                         |
| 28             | D, D  | 3,357               | 5.4%                          |
| 29             | D, D  | 614                 | 0.9%                          |
| 30             | AN, BN  | 1                   | 0.0%                          |
| 31             | BN, D   | 3,774               | 5.9%                          |
| 32             | AN, W   | -149                | -0.3%                         |
| 33             | W, W  | -93                 | -0.1%                         |
| 34             | D, C  | 3,632               | 5.5%                          |
| 35             | C, C  | 7,212               | 10.4%                         |
| 36             | D, BN   | 3,683               | 5.3%                          |
| 37             | BN, AN  | -48                 | -0.1%                         |
| 38             | W, W  | -6                  | 0.0%                          |
| 39             | BN, D   | 18                  | 0.0%                          |
| 40             | D, C  | 6,544               | 9.4%                          |
| 41             | C, C  | 26,124              | 30.4%                         |
| 42             | C, C  | 17,006              | 19.0%                         |
| <b>Average</b> |   | <b>3,227</b>        | <b>4.2%</b>                   |
| <b>Maximum</b> |   | <b>27,344</b>       | <b>35.8%</b>                  |
| <b>Minimum</b> |   | <b>-734</b>         | <b>-1.2%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-128. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 2 (SR2) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -33                 | 0.0%                          |
| 2    | W, W  | 238                 | 0.0%                          |
| 3    | C, C  | 5,344               | 1.0%                          |
| 4    | C, C  | 9,694               | 1.5%                          |
| 5    | AN, W   | 788                 | 0.2%                          |
| 6    | BN, AN  | -4,724              | -0.9%                         |
| 7    | AN, W   | -987                | -0.2%                         |
| 8    | D, D  | -834                | -0.2%                         |
| 9    | W, W  | -148                | 0.0%                          |
| 10   | W, W  | -18                 | 0.0%                          |
| 11   | W, AN   | -1                  | 0.0%                          |
| 12   | D, D  | 1,314               | 0.2%                          |
| 13   | W, W  | 529                 | 0.1%                          |
| 14   | D, D  | 11,181              | 1.9%                          |
| 15   | C, C  | 17,667              | 2.9%                          |
| 16   | D, C  | -2,023              | -0.3%                         |
| 17   | C, C  | 4,282               | 0.8%                          |
| 18   | C, C  | 5,489               | 0.9%                          |
| 19   | C, C  | 1,459               | 0.2%                          |
| 20   | AN, W   | 13                  | 0.0%                          |
| 21   | C, C  | 15,475              | 2.8%                          |
| 22   | W, W  | 3,716               | 0.7%                          |
| 23   | W, W  | 0                   | 0.0%                          |
| 24   | W, W  | 14                  | 0.0%                          |
| 25   | W, W  | 112                 | 0.0%                          |
| 26   | W, AN   | -2                  | 0.0%                          |
| 27   | AN, AN  | 8                   | 0.0%                          |
| 28   | D, D  | 6,742               | 1.3%                          |
| 29   | D, D  | 1,066               | 0.2%                          |
| 30   | AN, BN  | 27                  | 0.0%                          |
| 31   | BN, D   | 4,985               | 0.9%                          |
| 32   | AN, W   | -75                 | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -9                  | 0.0%                          |
| 34             | D, C  | 4,881               | 0.8%                          |
| 35             | C, C  | 10,067              | 1.8%                          |
| 36             | D, BN   | 4,797               | 0.8%                          |
| 37             | BN, AN  | 242                 | 0.1%                          |
| 38             | W, W  | 4                   | 0.0%                          |
| 39             | BN, D   | -298                | -0.1%                         |
| 40             | D, C  | 10,008              | 1.6%                          |
| 41             | C, C  | 10,344              | 1.6%                          |
| 42             | C, C  | 5,195               | 0.8%                          |
| <b>Average</b> |   | <b>3,013</b>        | <b>0.5%</b>                   |
| <b>Maximum</b> |   | <b>17,667</b>       | <b>2.9%</b>                   |
| <b>Minimum</b> |   | <b>-4,724</b>       | <b>-0.9%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-129. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 3 (SR3) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 2,660               | 0.9%                          |
| 2    | W, W  | 5,729               | 1.9%                          |
| 3    | C, C  | 45,895              | 10.2%                         |
| 4    | C, C  | 284,210             | 49.3%                         |
| 5    | AN, W   | 14,276              | 4.0%                          |
| 6    | BN, AN  | -22,749             | -6.0%                         |
| 7    | AN, W   | -4,800              | -1.5%                         |
| 8    | D, D  | -1,629              | -0.5%                         |
| 9    | W, W  | 1,677               | 0.7%                          |
| 10   | W, W  | 1,311               | 0.5%                          |
| 11   | W, AN   | 2,981               | 0.9%                          |
| 12   | D, D  | 10,542              | 2.7%                          |
| 13   | W, W  | 7,603               | 2.2%                          |
| 14   | D, D  | 76,049              | 18.1%                         |
| 15   | C, C  | 127,361             | 28.5%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 1,135               | 0.3%                          |
| 17             | C, C  | 48,425              | 10.2%                         |
| 18             | C, C  | 77,542              | 14.5%                         |
| 19             | C, C  | 18,083              | 3.0%                          |
| 20             | AN, W   | 890                 | 0.3%                          |
| 21             | C, C  | 101,893             | 25.4%                         |
| 22             | W, W  | 17,937              | 5.6%                          |
| 23             | W, W  | 1,642               | 0.6%                          |
| 24             | W, W  | 2,405               | 0.8%                          |
| 25             | W, W  | 1,900               | 0.8%                          |
| 26             | W, AN   | 2,468               | 0.9%                          |
| 27             | AN, AN  | 1,014               | 0.4%                          |
| 28             | D, D  | 49,645              | 13.5%                         |
| 29             | D, D  | 1,209               | 0.3%                          |
| 30             | AN, BN  | 2,396               | 0.8%                          |
| 31             | BN, D   | 32,078              | 9.3%                          |
| 32             | AN, W   | -670                | -0.2%                         |
| 33             | W, W  | 3,419               | 1.2%                          |
| 34             | D, C  | 43,012              | 12.0%                         |
| 35             | C, C  | 67,414              | 16.4%                         |
| 36             | D, BN   | 38,104              | 8.5%                          |
| 37             | BN, AN  | 3,478               | 1.2%                          |
| 38             | W, W  | 3,332               | 1.2%                          |
| 39             | BN, D   | 2,413               | 0.7%                          |
| 40             | D, C  | 62,292              | 15.3%                         |
| 41             | C, C  | 286,906             | 49.4%                         |
| 42             | C, C  | 187,547             | 31.6%                         |
| <b>Average</b> |   | <b>38,310</b>       | <b>8.0%</b>                   |
| <b>Maximum</b> |   | <b>286,906</b>      | <b>49.4%</b>                  |
| <b>Minimum</b> |   | <b>-22,749</b>      | <b>-6.0%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-130. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 4 (SR4) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -14,574             | -4.5%                         |
| 2    | W, W  | -10,017             | -2.9%                         |
| 3    | C, C  | 4,110               | 1.1%                          |
| 4    | C, C  | 259,173             | 68.9%                         |
| 5    | AN, W   | 7,775               | 2.3%                          |
| 6    | BN, AN  | -17,548             | -5.2%                         |
| 7    | AN, W   | -17,566             | -5.4%                         |
| 8    | D, D  | 342                 | 0.1%                          |
| 9    | W, W  | 5,954               | 2.0%                          |
| 10   | W, W  | 25                  | 0.0%                          |
| 11   | W, AN   | -6,518              | -1.9%                         |
| 12   | D, D  | 614                 | 0.2%                          |
| 13   | W, W  | -10,614             | -3.1%                         |
| 14   | D, D  | 13,088              | 3.6%                          |
| 15   | C, C  | 6,503               | 1.9%                          |
| 16   | D, C  | 236                 | 0.1%                          |
| 17   | C, C  | 10,551              | 3.3%                          |
| 18   | C, C  | 42,751              | 13.0%                         |
| 19   | C, C  | 9,693               | 2.7%                          |
| 20   | AN, W   | -10,670             | -3.3%                         |
| 21   | C, C  | 11,511              | 3.4%                          |
| 22   | W, W  | 78                  | 0.0%                          |
| 23   | W, W  | -12,686             | -3.7%                         |
| 24   | W, W  | -1,511              | -0.5%                         |
| 25   | W, W  | 27                  | 0.0%                          |
| 26   | W, AN   | -19,168             | -6.0%                         |
| 27   | AN, AN  | -2,556              | -0.8%                         |
| 28   | D, D  | 8,928               | 2.7%                          |
| 29   | D, D  | -568                | -0.2%                         |
| 30   | AN, BN  | -5,666              | -1.7%                         |
| 31   | BN, D   | 8,403               | 2.5%                          |
| 32   | AN, W   | -1,247              | -0.4%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 2,593               | 0.8%                          |
| 34             | D, C  | 11,748              | 3.2%                          |
| 35             | C, C  | 10,368              | 3.0%                          |
| 36             | D, BN   | 10,816              | 3.0%                          |
| 37             | BN, AN  | 13,330              | 4.2%                          |
| 38             | W, W  | 2,669               | 0.8%                          |
| 39             | BN, D   | -177                | -0.1%                         |
| 40             | D, C  | 11,347              | 3.1%                          |
| 41             | C, C  | 245,120             | 64.3%                         |
| 42             | C, C  | 149,285             | 40.4%                         |
| <b>Average</b> |   | <b>17,047</b>       | <b>4.5%</b>                   |
| <b>Maximum</b> |   | <b>259,173</b>      | <b>68.9%</b>                  |
| <b>Minimum</b> |   | <b>-19,168</b>      | <b>-6.0%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-131. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 5 (SR5) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 894                 | 0.2%                          |
| 2    | W, W  | 585                 | 0.1%                          |
| 3    | C, C  | 1,956               | 0.4%                          |
| 4    | C, C  | 6,927               | 1.2%                          |
| 5    | AN, W   | 4,962               | 1.1%                          |
| 6    | BN, AN  | -2,211              | -0.5%                         |
| 7    | AN, W   | 689                 | 0.2%                          |
| 8    | D, D  | 619                 | 0.1%                          |
| 9    | W, W  | 678                 | 0.2%                          |
| 10   | W, W  | 21                  | 0.0%                          |
| 11   | W, AN   | 876                 | 0.2%                          |
| 12   | D, D  | 1,115               | 0.2%                          |
| 13   | W, W  | 798                 | 0.2%                          |
| 14   | D, D  | 4,747               | 1.0%                          |
| 15   | C, C  | 8,960               | 1.9%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -6,656              | -1.4%                         |
| 17             | C, C  | 4,094               | 1.0%                          |
| 18             | C, C  | 6,848               | 1.5%                          |
| 19             | C, C  | 11,630              | 2.3%                          |
| 20             | AN, W   | 3,520               | 0.9%                          |
| 21             | C, C  | 6,636               | 1.4%                          |
| 22             | W, W  | 1,612               | 0.4%                          |
| 23             | W, W  | -838                | -0.2%                         |
| 24             | W, W  | 831                 | 0.2%                          |
| 25             | W, W  | 181                 | 0.1%                          |
| 26             | W, AN   | 1,139               | 0.3%                          |
| 27             | AN, AN  | 951                 | 0.2%                          |
| 28             | D, D  | 2,996               | 0.6%                          |
| 29             | D, D  | 1,279               | 0.3%                          |
| 30             | AN, BN  | 348                 | 0.1%                          |
| 31             | BN, D   | 3,894               | 0.9%                          |
| 32             | AN, W   | 83                  | 0.0%                          |
| 33             | W, W  | -913                | -0.2%                         |
| 34             | D, C  | 4,335               | 1.0%                          |
| 35             | C, C  | 4,404               | 0.9%                          |
| 36             | D, BN   | 1,769               | 0.3%                          |
| 37             | BN, AN  | -49                 | 0.0%                          |
| 38             | W, W  | -42                 | 0.0%                          |
| 39             | BN, D   | 1,879               | 0.4%                          |
| 40             | D, C  | 3,702               | 0.7%                          |
| 41             | C, C  | 12,816              | 2.4%                          |
| 42             | C, C  | 9,124               | 1.6%                          |
| <b>Average</b> |   | <b>2,552</b>        | <b>0.5%</b>                   |
| <b>Maximum</b> |   | <b>12,816</b>       | <b>2.4%</b>                   |
| <b>Minimum</b> |   | <b>-6,656</b>       | <b>-1.4%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-132. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 6 (SR6) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -276                | 0.0%                          |
| 2    | W, W  | 893                 | 0.1%                          |
| 3    | C, C  | 1,469               | 0.2%                          |
| 4    | C, C  | 17,926              | 1.9%                          |
| 5    | AN, W   | 2,521               | 0.4%                          |
| 6    | BN, AN  | -339                | 0.0%                          |
| 7    | AN, W   | 208                 | 0.0%                          |
| 8    | D, D  | 2,033               | 0.3%                          |
| 9    | W, W  | 235                 | 0.0%                          |
| 10   | W, W  | -819                | -0.1%                         |
| 11   | W, AN   | -684                | -0.1%                         |
| 12   | D, D  | -717                | -0.1%                         |
| 13   | W, W  | -308                | 0.0%                          |
| 14   | D, D  | 3,951               | 0.5%                          |
| 15   | C, C  | 1,546               | 0.2%                          |
| 16   | D, C  | 166                 | 0.0%                          |
| 17   | C, C  | -365                | 0.0%                          |
| 18   | C, C  | 668                 | 0.1%                          |
| 19   | C, C  | 1,716               | 0.2%                          |
| 20   | AN, W   | 437                 | 0.1%                          |
| 21   | C, C  | 7,313               | 0.9%                          |
| 22   | W, W  | 184                 | 0.0%                          |
| 23   | W, W  | 181                 | 0.0%                          |
| 24   | W, W  | -259                | 0.0%                          |
| 25   | W, W  | -471                | -0.1%                         |
| 26   | W, AN   | -658                | -0.1%                         |
| 27   | AN, AN  | 72                  | 0.0%                          |
| 28   | D, D  | 253                 | 0.0%                          |
| 29   | D, D  | 346                 | 0.1%                          |
| 30   | AN, BN  | 3,222               | 0.5%                          |
| 31   | BN, D   | -248                | 0.0%                          |
| 32   | AN, W   | -1                  | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 537                 | 0.1%                          |
| 34             | D, C  | -137                | 0.0%                          |
| 35             | C, C  | 3,053               | 0.4%                          |
| 36             | D, BN   | 2,452               | 0.3%                          |
| 37             | BN, AN  | -211                | 0.0%                          |
| 38             | W, W  | -672                | -0.1%                         |
| 39             | BN, D   | 591                 | 0.1%                          |
| 40             | D, C  | 1,606               | 0.2%                          |
| 41             | C, C  | 15,151              | 1.7%                          |
| 42             | C, C  | 17,627              | 2.1%                          |
| <b>Average</b> |   | <b>1,909</b>        | <b>0.2%</b>                   |
| <b>Maximum</b> |   | <b>17,926</b>       | <b>2.1%</b>                   |
| <b>Minimum</b> |   | <b>-819</b>         | <b>-0.1%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-133. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 7 (SR7) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -887                | -0.3%                         |
| 2    | W, W  | 172                 | 0.0%                          |
| 3    | C, C  | -430                | -0.1%                         |
| 4    | C, C  | -2,134              | -0.5%                         |
| 5    | AN, W   | 644                 | 0.2%                          |
| 6    | BN, AN  | -1,058              | -0.3%                         |
| 7    | AN, W   | -1,050              | -0.3%                         |
| 8    | D, D  | -1,369              | -0.4%                         |
| 9    | W, W  | -272                | -0.1%                         |
| 10   | W, W  | 787                 | 0.2%                          |
| 11   | W, AN   | -177                | 0.0%                          |
| 12   | D, D  | -2,146              | -0.6%                         |
| 13   | W, W  | 1,078               | 0.3%                          |
| 14   | D, D  | -998                | -0.3%                         |
| 15   | C, C  | 613                 | 0.2%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -1,647              | -0.4%                         |
| 17             | C, C  | -150                | 0.0%                          |
| 18             | C, C  | 199                 | 0.1%                          |
| 19             | C, C  | -808                | -0.2%                         |
| 20             | AN, W   | 1,106               | 0.3%                          |
| 21             | C, C  | -943                | -0.2%                         |
| 22             | W, W  | -2,036              | -0.5%                         |
| 23             | W, W  | -1,634              | -0.4%                         |
| 24             | W, W  | -1,052              | -0.3%                         |
| 25             | W, W  | 503                 | 0.1%                          |
| 26             | W, AN   | 447                 | 0.1%                          |
| 27             | AN, AN  | 632                 | 0.2%                          |
| 28             | D, D  | -1,554              | -0.4%                         |
| 29             | D, D  | -1,374              | -0.3%                         |
| 30             | AN, BN  | -795                | -0.2%                         |
| 31             | BN, D   | -2,139              | -0.5%                         |
| 32             | AN, W   | -948                | -0.3%                         |
| 33             | W, W  | -666                | -0.2%                         |
| 34             | D, C  | -3,144              | -0.8%                         |
| 35             | C, C  | -2,122              | -0.5%                         |
| 36             | D, BN   | -2,096              | -0.5%                         |
| 37             | BN, AN  | 442                 | 0.1%                          |
| 38             | W, W  | 191                 | 0.1%                          |
| 39             | BN, D   | -455                | -0.1%                         |
| 40             | D, C  | -909                | -0.2%                         |
| 41             | C, C  | -3,234              | -0.8%                         |
| 42             | C, C  | 1,161               | 0.3%                          |
| <b>Average</b> |   | <b>-720</b>         | <b>-0.2%</b>                  |
| <b>Maximum</b> |   | <b>1,161</b>        | <b>0.3%</b>                   |
| <b>Minimum</b> |   | <b>-3,234</b>       | <b>-0.8%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-134. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 8 (SR8) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 30,540              | 3.6%                          |
| 2    | W, W  | 31,117              | 3.4%                          |
| 3    | C, C  | 4,592               | 0.4%                          |
| 4    | C, C  | 126                 | 0.0%                          |
| 5    | AN, W   | 40,303              | 4.4%                          |
| 6    | BN, AN  | 35,434              | 3.9%                          |
| 7    | AN, W   | 42,168              | 5.0%                          |
| 8    | D, D  | 42,641              | 4.2%                          |
| 9    | W, W  | 44,986              | 5.7%                          |
| 10   | W, W  | 43,286              | 5.7%                          |
| 11   | W, AN   | 37,215              | 3.9%                          |
| 12   | D, D  | 39,248              | 4.0%                          |
| 13   | W, W  | 40,100              | 4.5%                          |
| 14   | D, D  | 6,598               | 0.6%                          |
| 15   | C, C  | 856                 | 0.1%                          |
| 16   | D, C  | 935                 | 0.1%                          |
| 17   | C, C  | 593                 | 0.1%                          |
| 18   | C, C  | 416                 | 0.0%                          |
| 19   | C, C  | -76                 | 0.0%                          |
| 20   | AN, W   | 39,912              | 4.4%                          |
| 21   | C, C  | 4,292               | 0.4%                          |
| 22   | W, W  | 40,814              | 4.6%                          |
| 23   | W, W  | 33,847              | 3.7%                          |
| 24   | W, W  | 43,453              | 4.6%                          |
| 25   | W, W  | 46,637              | 6.2%                          |
| 26   | W, AN   | 25,933              | 3.1%                          |
| 27   | AN, AN  | 22,378              | 2.5%                          |
| 28   | D, D  | 35,771              | 3.6%                          |
| 29   | D, D  | 34,939              | 3.6%                          |
| 30   | AN, BN  | 40,247              | 4.3%                          |
| 31   | BN, D   | 38,496              | 3.9%                          |
| 32   | AN, W   | 42,264              | 4.9%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 42,825              | 4.8%                          |
| 34             | D, C  | 9,655               | 0.9%                          |
| 35             | C, C  | 2,815               | 0.3%                          |
| 36             | D, BN   | 38,155              | 3.9%                          |
| 37             | BN, AN  | 34,028              | 4.1%                          |
| 38             | W, W  | 39,956              | 5.1%                          |
| 39             | BN, D   | 40,156              | 3.9%                          |
| 40             | D, C  | 6,188               | 0.6%                          |
| 41             | C, C  | 1,335               | 0.1%                          |
| 42             | C, C  | 645                 | 0.1%                          |
| <b>Average</b> |   | <b>26,329</b>       | <b>2.9%</b>                   |
| <b>Maximum</b> |   | <b>46,637</b>       | <b>6.2%</b>                   |
| <b>Minimum</b> |   | <b>-76</b>          | <b>0.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-135. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 9 (SR9) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 12,106              | 2.7%                          |
| 2    | W, W  | 13,121              | 2.7%                          |
| 3    | C, C  | 7,101               | 1.4%                          |
| 4    | C, C  | 655                 | 0.1%                          |
| 5    | AN, W   | 12,994              | 2.5%                          |
| 6    | BN, AN  | 10,917              | 2.0%                          |
| 7    | AN, W   | 12,107              | 2.4%                          |
| 8    | D, D  | 13,053              | 2.4%                          |
| 9    | W, W  | 12,963              | 2.8%                          |
| 10   | W, W  | 11,024              | 2.6%                          |
| 11   | W, AN   | 14,190              | 2.6%                          |
| 12   | D, D  | 10,838              | 1.9%                          |
| 13   | W, W  | 14,780              | 3.0%                          |
| 14   | D, D  | 8,379               | 1.6%                          |
| 15   | C, C  | 4,178               | 0.8%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 6,569               | 1.2%                          |
| 17             | C, C  | 2,573               | 0.5%                          |
| 18             | C, C  | 2,146               | 0.4%                          |
| 19             | C, C  | -619                | -0.1%                         |
| 20             | AN, W   | 11,846              | 2.3%                          |
| 21             | C, C  | 10,582              | 1.9%                          |
| 22             | W, W  | 16,275              | 3.2%                          |
| 23             | W, W  | 15,916              | 3.0%                          |
| 24             | W, W  | 11,238              | 2.2%                          |
| 25             | W, W  | 11,441              | 2.5%                          |
| 26             | W, AN   | 12,845              | 2.7%                          |
| 27             | AN, AN  | 13,188              | 2.5%                          |
| 28             | D, D  | 8,534               | 1.6%                          |
| 29             | D, D  | 10,520              | 2.0%                          |
| 30             | AN, BN  | 11,816              | 2.4%                          |
| 31             | BN, D   | 9,252               | 1.7%                          |
| 32             | AN, W   | 14,339              | 3.0%                          |
| 33             | W, W  | 10,287              | 2.0%                          |
| 34             | D, C  | 5,824               | 1.1%                          |
| 35             | C, C  | 6,909               | 1.3%                          |
| 36             | D, BN   | 3,786               | 0.7%                          |
| 37             | BN, AN  | 7,955               | 1.7%                          |
| 38             | W, W  | 8,505               | 1.8%                          |
| 39             | BN, D   | 11,067              | 2.0%                          |
| 40             | D, C  | 9,026               | 1.6%                          |
| 41             | C, C  | 2,874               | 0.5%                          |
| 42             | C, C  | -98                 | 0.0%                          |
| <b>Average</b> |   | <b>9,357</b>        | <b>1.8%</b>                   |
| <b>Maximum</b> |   | <b>16,275</b>       | <b>3.2%</b>                   |
| <b>Minimum</b> |   | <b>-619</b>         | <b>-0.1%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-136. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 10 (SR10) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 149,570             | 51.8%                         |
| 2    | W, W  | 171,878             | 46.4%                         |
| 3    | C, C  | 67,066              | 13.0%                         |
| 4    | C, C  | 238,098             | 29.4%                         |
| 5    | AN, W   | 179,137             | 48.4%                         |
| 6    | BN, AN  | 120,556             | 29.9%                         |
| 7    | AN, W   | 145,478             | 48.0%                         |
| 8    | D, D  | 261,648             | 59.1%                         |
| 9    | W, W  | 182,090             | 61.2%                         |
| 10   | W, W  | 132,670             | 56.6%                         |
| 11   | W, AN   | 161,126             | 52.5%                         |
| 12   | D, D  | 135,838             | 30.5%                         |
| 13   | W, W  | 174,488             | 55.7%                         |
| 14   | D, D  | 97,204              | 21.4%                         |
| 15   | C, C  | 275,544             | 52.5%                         |
| 16   | D, C  | 258,917             | 47.7%                         |
| 17   | C, C  | 56,396              | 9.1%                          |
| 18   | C, C  | 62,267              | 8.1%                          |
| 19   | C, C  | 3,892               | 0.5%                          |
| 20   | AN, W   | 150,831             | 36.1%                         |
| 21   | C, C  | 113,364             | 20.5%                         |
| 22   | W, W  | 175,638             | 51.5%                         |
| 23   | W, W  | 187,567             | 59.2%                         |
| 24   | W, W  | 136,494             | 44.2%                         |
| 25   | W, W  | 143,312             | 59.8%                         |
| 26   | W, AN   | 165,051             | 58.4%                         |
| 27   | AN, AN  | 162,168             | 41.0%                         |
| 28   | D, D  | 88,836              | 19.2%                         |
| 29   | D, D  | 289,918             | 61.9%                         |
| 30   | AN, BN  | 204,943             | 47.7%                         |
| 31   | BN, D   | 107,566             | 22.9%                         |
| 32   | AN, W   | 167,257             | 55.0%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 139,337             | 48.0%                         |
| 34             | D, C  | 97,000              | 23.2%                         |
| 35             | C, C  | 332,207             | 68.6%                         |
| 36             | D, BN   | 137,171             | 24.2%                         |
| 37             | BN, AN  | 95,488              | 22.1%                         |
| 38             | W, W  | 133,535             | 46.4%                         |
| 39             | BN, D   | 157,138             | 41.3%                         |
| 40             | D, C  | 110,922             | 24.5%                         |
| 41             | C, C  | 30,680              | 4.0%                          |
| 42             | C, C  | 56,849              | 7.9%                          |
| <b>Average</b> |   | <b>148,979</b>      | <b>38.3%</b>                  |
| <b>Maximum</b> |   | <b>332,207</b>      | <b>68.6%</b>                  |
| <b>Minimum</b> |   | <b>3,892</b>        | <b>0.5%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-137. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 11 (SR11) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -89                 | 0.0%                          |
| 2    | W, W  | 277                 | 0.1%                          |
| 3    | C, C  | 15,587              | 3.7%                          |
| 4    | C, C  | 23,629              | 4.0%                          |
| 5    | AN, W   | 1,440               | 0.4%                          |
| 6    | BN, AN  | 6                   | 0.0%                          |
| 7    | AN, W   | 79                  | 0.0%                          |
| 8    | D, D  | -12                 | 0.0%                          |
| 9    | W, W  | 2,284               | 0.8%                          |
| 10   | W, W  | 817                 | 0.3%                          |
| 11   | W, AN   | -10,494             | -3.0%                         |
| 12   | D, D  | -62                 | 0.0%                          |
| 13   | W, W  | 1,858               | 0.6%                          |
| 14   | D, D  | 14,074              | 3.7%                          |
| 15   | C, C  | 18,076              | 4.0%                          |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 1,350               | 0.3%                          |
| 17             | C, C  | 6,696               | 1.7%                          |
| 18             | C, C  | 5,281               | 1.3%                          |
| 19             | C, C  | 4,936               | 1.2%                          |
| 20             | AN, W   | 3,320               | 1.0%                          |
| 21             | C, C  | 4,570               | 1.2%                          |
| 22             | W, W  | -1,066              | -0.4%                         |
| 23             | W, W  | -929                | -0.3%                         |
| 24             | W, W  | -2,594              | -0.8%                         |
| 25             | W, W  | 363                 | 0.1%                          |
| 26             | W, AN   | -7,117              | -2.3%                         |
| 27             | AN, AN  | 292                 | 0.1%                          |
| 28             | D, D  | 899                 | 0.3%                          |
| 29             | D, D  | 2,037               | 0.6%                          |
| 30             | AN, BN  | 7,738               | 2.4%                          |
| 31             | BN, D   | 2,052               | 0.6%                          |
| 32             | AN, W   | -142                | -0.1%                         |
| 33             | W, W  | -8,722              | -3.0%                         |
| 34             | D, C  | 4,136               | 1.1%                          |
| 35             | C, C  | 1,708               | 0.4%                          |
| 36             | D, BN   | 2,587               | 0.7%                          |
| 37             | BN, AN  | 299                 | 0.1%                          |
| 38             | W, W  | 1,754               | 0.6%                          |
| 39             | BN, D   | -897                | -0.2%                         |
| 40             | D, C  | 968                 | 0.2%                          |
| 41             | C, C  | 16,784              | 3.5%                          |
| 42             | C, C  | 18,273              | 4.0%                          |
| <b>Average</b> |   | <b>3,144</b>        | <b>0.7%</b>                   |
| <b>Maximum</b> |   | <b>23,629</b>       | <b>4.0%</b>                   |
| <b>Minimum</b> |   | <b>-10,494</b>      | <b>-3.0%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-138. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 12 (SR12) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 1,069               | 0.2%                          |
| 2    | W, W  | 1,055               | 0.2%                          |
| 3    | C, C  | 707                 | 0.1%                          |
| 4    | C, C  | 281                 | 0.0%                          |
| 5    | AN, W   | 86                  | 0.0%                          |
| 6    | BN, AN  | -20                 | 0.0%                          |
| 7    | AN, W   | 50                  | 0.0%                          |
| 8    | D, D  | -77                 | 0.0%                          |
| 9    | W, W  | 67                  | 0.0%                          |
| 10   | W, W  | 271                 | 0.1%                          |
| 11   | W, AN   | 109                 | 0.0%                          |
| 12   | D, D  | 251                 | 0.0%                          |
| 13   | W, W  | 173                 | 0.0%                          |
| 14   | D, D  | 449                 | 0.1%                          |
| 15   | C, C  | 328                 | 0.0%                          |
| 16   | D, C  | 232                 | 0.0%                          |
| 17   | C, C  | -197                | 0.0%                          |
| 18   | C, C  | 250                 | 0.0%                          |
| 19   | C, C  | -6                  | 0.0%                          |
| 20   | AN, W   | 6,117               | 1.0%                          |
| 21   | C, C  | -562                | -0.1%                         |
| 22   | W, W  | -480                | -0.1%                         |
| 23   | W, W  | -25                 | 0.0%                          |
| 24   | W, W  | -13                 | 0.0%                          |
| 25   | W, W  | -170                | 0.0%                          |
| 26   | W, AN   | 6                   | 0.0%                          |
| 27   | AN, AN  | -53                 | 0.0%                          |
| 28   | D, D  | -430                | -0.1%                         |
| 29   | D, D  | 81                  | 0.0%                          |
| 30   | AN, BN  | 22,818              | 4.4%                          |
| 31   | BN, D   | 5,898               | 1.1%                          |
| 32   | AN, W   | 111                 | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -133                | 0.0%                          |
| 34             | D, C  | 398                 | 0.1%                          |
| 35             | C, C  | -48                 | 0.0%                          |
| 36             | D, BN   | 5,357               | 0.9%                          |
| 37             | BN, AN  | 1,069               | 0.2%                          |
| 38             | W, W  | 6                   | 0.0%                          |
| 39             | BN, D   | -441                | -0.1%                         |
| 40             | D, C  | -96                 | 0.0%                          |
| 41             | C, C  | -116                | 0.0%                          |
| 42             | C, C  | 355                 | 0.0%                          |
| <b>Average</b> |   | <b>1,065</b>        | <b>0.2%</b>                   |
| <b>Maximum</b> |   | <b>22,818</b>       | <b>4.4%</b>                   |
| <b>Minimum</b> |   | <b>-562</b>         | <b>-0.1%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-139. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 13 (SR13) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 923                 | 0.1%                          |
| 2    | W, W  | 245                 | 0.0%                          |
| 3    | C, C  | 805                 | 0.0%                          |
| 4    | C, C  | 20,811              | 0.9%                          |
| 5    | AN, W   | 11,318              | 0.7%                          |
| 6    | BN, AN  | 570                 | 0.0%                          |
| 7    | AN, W   | 488                 | 0.0%                          |
| 8    | D, D  | 11,900              | 0.6%                          |
| 9    | W, W  | 5,984               | 0.4%                          |
| 10   | W, W  | 1,193               | 0.1%                          |
| 11   | W, AN   | 687                 | 0.0%                          |
| 12   | D, D  | 4,732               | 0.2%                          |
| 13   | W, W  | 279                 | 0.0%                          |
| 14   | D, D  | 329                 | 0.0%                          |
| 15   | C, C  | 25,308              | 1.2%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 18,299              | 0.8%                          |
| 17             | C, C  | 4,198               | 0.2%                          |
| 18             | C, C  | 4,178               | 0.2%                          |
| 19             | C, C  | 1,173               | 0.1%                          |
| 20             | AN, W   | -3,133              | -0.2%                         |
| 21             | C, C  | 3,634               | 0.2%                          |
| 22             | W, W  | 530                 | 0.0%                          |
| 23             | W, W  | 691                 | 0.0%                          |
| 24             | W, W  | 1,350               | 0.1%                          |
| 25             | W, W  | 2,900               | 0.2%                          |
| 26             | W, AN   | 409                 | 0.0%                          |
| 27             | AN, AN  | 784                 | 0.0%                          |
| 28             | D, D  | 1,354               | 0.1%                          |
| 29             | D, D  | 16,904              | 0.8%                          |
| 30             | AN, BN  | 2,108               | 0.1%                          |
| 31             | BN, D   | -4,124              | -0.2%                         |
| 32             | AN, W   | -3,365              | -0.2%                         |
| 33             | W, W  | -1,044              | -0.1%                         |
| 34             | D, C  | -1,376              | -0.1%                         |
| 35             | C, C  | 21,775              | 1.1%                          |
| 36             | D, BN   | 421                 | 0.0%                          |
| 37             | BN, AN  | -6,024              | -0.4%                         |
| 38             | W, W  | 833                 | 0.1%                          |
| 39             | BN, D   | 21                  | 0.0%                          |
| 40             | D, C  | -3,475              | -0.2%                         |
| 41             | C, C  | -8,078              | -0.3%                         |
| 42             | C, C  | -5,810              | -0.2%                         |
| <b>Average</b> |   | <b>3,112</b>        | <b>0.2%</b>                   |
| <b>Maximum</b> |   | <b>25,308</b>       | <b>1.2%</b>                   |
| <b>Minimum</b> |   | <b>-8,078</b>       | <b>-0.4%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-140. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 14 (SR14) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 380,136             | 174.8%                        |
| 2    | W, W  | 487,761             | 145.7%                        |
| 3    | C, C  | 193,807             | 29.7%                         |
| 4    | C, C  | 21,116              | 1.7%                          |
| 5    | AN, W   | 394,745             | 101.7%                        |
| 6    | BN, AN  | 362,828             | 75.9%                         |
| 7    | AN, W   | 354,481             | 144.7%                        |
| 8    | D, D  | 427,550             | 91.3%                         |
| 9    | W, W  | 376,288             | 128.1%                        |
| 10   | W, W  | 260,520             | 153.4%                        |
| 11   | W, AN   | 348,439             | 181.0%                        |
| 12   | D, D  | 414,411             | 82.7%                         |
| 13   | W, W  | 421,294             | 166.2%                        |
| 14   | D, D  | 261,879             | 51.7%                         |
| 15   | C, C  | 130,269             | 18.0%                         |
| 16   | D, C  | 185,133             | 24.6%                         |
| 17   | C, C  | 54,615              | 5.0%                          |
| 18   | C, C  | -4,166              | -0.3%                         |
| 19   | C, C  | -4,396              | -0.3%                         |
| 20   | AN, W   | 456,813             | 74.6%                         |
| 21   | C, C  | 356,275             | 44.1%                         |
| 22   | W, W  | 520,494             | 150.1%                        |
| 23   | W, W  | 552,595             | 198.9%                        |
| 24   | W, W  | 440,321             | 167.9%                        |
| 25   | W, W  | 407,816             | 193.0%                        |
| 26   | W, AN   | 467,993             | 194.7%                        |
| 27   | AN, AN  | 532,845             | 90.4%                         |
| 28   | D, D  | 290,886             | 38.3%                         |
| 29   | D, D  | 367,568             | 46.4%                         |
| 30   | AN, BN  | 476,674             | 73.6%                         |
| 31   | BN, D   | 451,398             | 62.7%                         |
| 32   | AN, W   | 493,869             | 142.1%                        |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 390,641             | 178.8%                        |
| 34             | D, C  | 309,838             | 51.8%                         |
| 35             | C, C  | 248,739             | 28.7%                         |
| 36             | D, BN   | 121,160             | 10.1%                         |
| 37             | BN, AN  | 314,406             | 39.1%                         |
| 38             | W, W  | 395,438             | 137.9%                        |
| 39             | BN, D   | 392,696             | 89.7%                         |
| 40             | D, C  | 358,002             | 46.0%                         |
| 41             | C, C  | 79,152              | 6.5%                          |
| 42             | C, C  | -3,966              | -0.3%                         |
| <b>Average</b> |   | <b>321,152</b>      | <b>86.7%</b>                  |
| <b>Maximum</b> |   | <b>552,595</b>      | <b>198.9%</b>                 |
| <b>Minimum</b> |   | <b>-4,396</b>       | <b>-0.3%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-141. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 15 (SR15) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 45,291              | 3.3%                          |
| 2    | W, W  | 64,237              | 4.6%                          |
| 3    | C, C  | 39,768              | 2.2%                          |
| 4    | C, C  | 11,209              | 0.6%                          |
| 5    | AN, W   | 42,581              | 3.2%                          |
| 6    | BN, AN  | 48,171              | 3.7%                          |
| 7    | AN, W   | 32,472              | 2.6%                          |
| 8    | D, D  | 63,555              | 3.9%                          |
| 9    | W, W  | 71,008              | 6.1%                          |
| 10   | W, W  | 41,649              | 3.8%                          |
| 11   | W, AN   | 72,556              | 5.0%                          |
| 12   | D, D  | 52,288              | 3.2%                          |
| 13   | W, W  | 39,009              | 3.2%                          |
| 14   | D, D  | 31,032              | 1.9%                          |
| 15   | C, C  | 34,722              | 1.9%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 42,948              | 2.4%                          |
| 17             | C, C  | 11,657              | 0.6%                          |
| 18             | C, C  | 15,973              | 0.9%                          |
| 19             | C, C  | 18,582              | 1.0%                          |
| 20             | AN, W   | 40,844              | 3.3%                          |
| 21             | C, C  | 40,535              | 2.5%                          |
| 22             | W, W  | 54,570              | 5.0%                          |
| 23             | W, W  | 46,812              | 3.6%                          |
| 24             | W, W  | 63,008              | 4.5%                          |
| 25             | W, W  | 44,041              | 4.4%                          |
| 26             | W, AN   | 53,660              | 3.9%                          |
| 27             | AN, AN  | 47,806              | 3.3%                          |
| 28             | D, D  | 23,810              | 1.5%                          |
| 29             | D, D  | 51,504              | 3.0%                          |
| 30             | AN, BN  | 50,911              | 3.3%                          |
| 31             | BN, D   | 41,756              | 2.5%                          |
| 32             | AN, W   | 49,717              | 4.1%                          |
| 33             | W, W  | 80,095              | 7.2%                          |
| 34             | D, C  | 49,509              | 2.9%                          |
| 35             | C, C  | 32,889              | 1.9%                          |
| 36             | D, BN   | 19,710              | 1.1%                          |
| 37             | BN, AN  | 53,103              | 3.4%                          |
| 38             | W, W  | 61,519              | 5.3%                          |
| 39             | BN, D   | 55,386              | 3.6%                          |
| 40             | D, C  | 34,296              | 1.8%                          |
| 41             | C, C  | 10,855              | 0.5%                          |
| 42             | C, C  | 25,512              | 1.3%                          |
| <b>Average</b> |   | <b>43,109</b>       | <b>3.0%</b>                   |
| <b>Maximum</b> |   | <b>80,095</b>       | <b>7.2%</b>                   |
| <b>Minimum</b> |   | <b>10,855</b>       | <b>0.5%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-142. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 16 (SR16) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -9                  | 0.0%                          |
| 2    | W, W  | 0                   | 0.0%                          |
| 3    | C, C  | -116                | 0.0%                          |
| 4    | C, C  | 119                 | 0.0%                          |
| 5    | AN, W   | -18                 | 0.0%                          |
| 6    | BN, AN  | 0                   | 0.0%                          |
| 7    | AN, W   | 1                   | 0.0%                          |
| 8    | D, D  | 1                   | 0.0%                          |
| 9    | W, W  | -4                  | 0.0%                          |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | 8                   | 0.0%                          |
| 12   | D, D  | 1                   | 0.0%                          |
| 13   | W, W  | 0                   | 0.0%                          |
| 14   | D, D  | 39                  | 0.0%                          |
| 15   | C, C  | 170                 | 0.1%                          |
| 16   | D, C  | -21                 | 0.0%                          |
| 17   | C, C  | 106                 | 0.0%                          |
| 18   | C, C  | 129                 | 0.1%                          |
| 19   | C, C  | 67                  | 0.0%                          |
| 20   | AN, W   | -73                 | -0.1%                         |
| 21   | C, C  | -18                 | 0.0%                          |
| 22   | W, W  | 27                  | 0.0%                          |
| 23   | W, W  | -73                 | -0.1%                         |
| 24   | W, W  | 31                  | 0.1%                          |
| 25   | W, W  | 0                   | 0.0%                          |
| 26   | W, AN   | 0                   | 0.0%                          |
| 27   | AN, AN  | 45                  | 0.0%                          |
| 28   | D, D  | 20                  | 0.0%                          |
| 29   | D, D  | -6                  | 0.0%                          |
| 30   | AN, BN  | 60                  | 0.0%                          |
| 31   | BN, D   | 10                  | 0.0%                          |
| 32   | AN, W   | 0                   | 0.0%                          |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 39                  | 0.1%                          |
| 34             | D, C  | 170                 | 0.1%                          |
| 35             | C, C  | -30                 | 0.0%                          |
| 36             | D, BN   | 140                 | 0.1%                          |
| 37             | BN, AN  | 119                 | 0.1%                          |
| 38             | W, W  | -23                 | 0.0%                          |
| 39             | BN, D   | 184                 | 0.1%                          |
| 40             | D, C  | 181                 | 0.1%                          |
| 41             | C, C  | 69                  | 0.0%                          |
| 42             | C, C  | 15                  | 0.0%                          |
| <b>Average</b> |   | <b>32</b>           | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>184</b>          | <b>0.1%</b>                   |
| <b>Minimum</b> |   | <b>-116</b>         | <b>-0.1%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-143. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 17 (SR17) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 16                  | 0.0%                          |
| 2    | W, W  | 28                  | 0.0%                          |
| 3    | C, C  | 90                  | 0.0%                          |
| 4    | C, C  | 6                   | 0.0%                          |
| 5    | AN, W   | -10                 | 0.0%                          |
| 6    | BN, AN  | 4                   | 0.0%                          |
| 7    | AN, W   | -34                 | 0.0%                          |
| 8    | D, D  | 13                  | 0.0%                          |
| 9    | W, W  | 36                  | 0.0%                          |
| 10   | W, W  | -27                 | 0.0%                          |
| 11   | W, AN   | 83                  | 0.0%                          |
| 12   | D, D  | 111                 | 0.0%                          |
| 13   | W, W  | -170                | -0.1%                         |
| 14   | D, D  | 30                  | 0.0%                          |
| 15   | C, C  | -45                 | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -7                  | 0.0%                          |
| 17             | C, C  | 60                  | 0.0%                          |
| 18             | C, C  | -32                 | 0.0%                          |
| 19             | C, C  | -73                 | 0.0%                          |
| 20             | AN, W   | 10                  | 0.0%                          |
| 21             | C, C  | 116                 | 0.0%                          |
| 22             | W, W  | 3                   | 0.0%                          |
| 23             | W, W  | -95                 | 0.0%                          |
| 24             | W, W  | 127                 | 0.0%                          |
| 25             | W, W  | -44                 | 0.0%                          |
| 26             | W, AN   | 63                  | 0.0%                          |
| 27             | AN, AN  | 46                  | 0.0%                          |
| 28             | D, D  | 133                 | 0.0%                          |
| 29             | D, D  | 72                  | 0.0%                          |
| 30             | AN, BN  | 116                 | 0.0%                          |
| 31             | BN, D   | 133                 | 0.0%                          |
| 32             | AN, W   | 62                  | 0.0%                          |
| 33             | W, W  | 19                  | 0.0%                          |
| 34             | D, C  | -86                 | 0.0%                          |
| 35             | C, C  | -35                 | 0.0%                          |
| 36             | D, BN   | 82                  | 0.0%                          |
| 37             | BN, AN  | 116                 | 0.0%                          |
| 38             | W, W  | -31                 | 0.0%                          |
| 39             | BN, D   | 86                  | 0.0%                          |
| 40             | D, C  | 2                   | 0.0%                          |
| 41             | C, C  | 8                   | 0.0%                          |
| 42             | C, C  | 52                  | 0.0%                          |
| <b>Average</b> |   | <b>25</b>           | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>133</b>          | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-170</b>         | <b>-0.1%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-144. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 18 (SR18) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 1,010               | 0.1%                          |
| 2    | W, W  | 1,576               | 0.1%                          |
| 3    | C, C  | 9,575               | 0.5%                          |
| 4    | C, C  | 1,396               | 0.1%                          |
| 5    | AN, W   | 294                 | 0.0%                          |
| 6    | BN, AN  | 1,186               | 0.1%                          |
| 7    | AN, W   | 909                 | 0.1%                          |
| 8    | D, D  | 3,918               | 0.3%                          |
| 9    | W, W  | 3,087               | 0.3%                          |
| 10   | W, W  | 216                 | 0.0%                          |
| 11   | W, AN   | 815                 | 0.1%                          |
| 12   | D, D  | 2,837               | 0.2%                          |
| 13   | W, W  | 733                 | 0.1%                          |
| 14   | D, D  | 7,818               | 0.5%                          |
| 15   | C, C  | 7,142               | 0.4%                          |
| 16   | D, C  | 8,082               | 0.5%                          |
| 17   | C, C  | 8,622               | 0.5%                          |
| 18   | C, C  | 4,586               | 0.3%                          |
| 19   | C, C  | 5,444               | 0.3%                          |
| 20   | AN, W   | -431                | 0.0%                          |
| 21   | C, C  | 18,350              | 1.2%                          |
| 22   | W, W  | 2,138               | 0.3%                          |
| 23   | W, W  | 1,836               | 0.2%                          |
| 24   | W, W  | 1,962               | 0.2%                          |
| 25   | W, W  | 1,702               | 0.3%                          |
| 26   | W, AN   | 1,016               | 0.1%                          |
| 27   | AN, AN  | 2,488               | 0.2%                          |
| 28   | D, D  | 17,622              | 1.3%                          |
| 29   | D, D  | 8,981               | 0.6%                          |
| 30   | AN, BN  | 7,184               | 0.6%                          |
| 31   | BN, D   | 6,134               | 0.4%                          |
| 32   | AN, W   | 1,894               | 0.2%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 1,744               | 0.2%                          |
| 34             | D, C  | 7,858               | 0.5%                          |
| 35             | C, C  | 5,489               | 0.4%                          |
| 36             | D, BN   | 4,111               | 0.3%                          |
| 37             | BN, AN  | 833                 | 0.1%                          |
| 38             | W, W  | 620                 | 0.1%                          |
| 39             | BN, D   | 6,134               | 0.4%                          |
| 40             | D, C  | 6,422               | 0.4%                          |
| 41             | C, C  | 2,439               | 0.1%                          |
| 42             | C, C  | 1,828               | 0.1%                          |
| <b>Average</b> |   | <b>4,229</b>        | <b>0.3%</b>                   |
| <b>Maximum</b> |   | <b>18,350</b>       | <b>1.3%</b>                   |
| <b>Minimum</b> |   | <b>-431</b>         | <b>0.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-145. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 19 (SR19) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 0                   | 0.0%                          |
| 2    | W, W  | -2                  | 0.0%                          |
| 3    | C, C  | 0                   | 0.0%                          |
| 4    | C, C  | -20                 | 0.0%                          |
| 5    | AN, W   | -33                 | 0.0%                          |
| 6    | BN, AN  | -18                 | 0.0%                          |
| 7    | AN, W   | 22                  | 0.0%                          |
| 8    | D, D  | -36                 | 0.0%                          |
| 9    | W, W  | 0                   | 0.0%                          |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | 74                  | 0.0%                          |
| 12   | D, D  | 7                   | 0.0%                          |
| 13   | W, W  | -1                  | 0.0%                          |
| 14   | D, D  | 34                  | 0.0%                          |
| 15   | C, C  | 7                   | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -1                  | 0.0%                          |
| 17             | C, C  | -42                 | 0.0%                          |
| 18             | C, C  | 28                  | 0.0%                          |
| 19             | C, C  | 0                   | 0.0%                          |
| 20             | AN, W   | 0                   | 0.0%                          |
| 21             | C, C  | 0                   | 0.0%                          |
| 22             | W, W  | 0                   | 0.0%                          |
| 23             | W, W  | 30                  | 0.0%                          |
| 24             | W, W  | 100                 | 0.0%                          |
| 25             | W, W  | 1                   | 0.0%                          |
| 26             | W, AN   | 0                   | 0.0%                          |
| 27             | AN, AN  | 0                   | 0.0%                          |
| 28             | D, D  | -16                 | 0.0%                          |
| 29             | D, D  | 10                  | 0.0%                          |
| 30             | AN, BN  | 0                   | 0.0%                          |
| 31             | BN, D   | 0                   | 0.0%                          |
| 32             | AN, W   | 0                   | 0.0%                          |
| 33             | W, W  | 0                   | 0.0%                          |
| 34             | D, C  | -12                 | 0.0%                          |
| 35             | C, C  | -27                 | 0.0%                          |
| 36             | D, BN   | 0                   | 0.0%                          |
| 37             | BN, AN  | 0                   | 0.0%                          |
| 38             | W, W  | -13                 | 0.0%                          |
| 39             | BN, D   | 0                   | 0.0%                          |
| 40             | D, C  | 0                   | 0.0%                          |
| 41             | C, C  | -43                 | 0.0%                          |
| 42             | C, C  | 0                   | 0.0%                          |
| <b>Average</b> |   | <b>1</b>            | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>100</b>          | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-43</b>          | <b>0.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-146. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 20 (SR20) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 0                   | 0.0%                          |
| 2    | W, W  | 0                   | 0.0%                          |
| 3    | C, C  | 23                  | 0.0%                          |
| 4    | C, C  | 2                   | 0.0%                          |
| 5    | AN, W   | 0                   | 0.0%                          |
| 6    | BN, AN  | -4                  | 0.0%                          |
| 7    | AN, W   | -134                | 0.0%                          |
| 8    | D, D  | -2                  | 0.0%                          |
| 9    | W, W  | 3                   | 0.0%                          |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | -3                  | 0.0%                          |
| 12   | D, D  | -24                 | 0.0%                          |
| 13   | W, W  | 0                   | 0.0%                          |
| 14   | D, D  | 13                  | 0.0%                          |
| 15   | C, C  | -120                | 0.0%                          |
| 16   | D, C  | 21                  | 0.0%                          |
| 17   | C, C  | 58                  | 0.0%                          |
| 18   | C, C  | 15                  | 0.0%                          |
| 19   | C, C  | 114                 | 0.0%                          |
| 20   | AN, W   | -65                 | 0.0%                          |
| 21   | C, C  | -13                 | 0.0%                          |
| 22   | W, W  | -15                 | 0.0%                          |
| 23   | W, W  | -23                 | 0.0%                          |
| 24   | W, W  | -43                 | 0.0%                          |
| 25   | W, W  | -27                 | 0.0%                          |
| 26   | W, AN   | -1                  | 0.0%                          |
| 27   | AN, AN  | 0                   | 0.0%                          |
| 28   | D, D  | 29                  | 0.0%                          |
| 29   | D, D  | -10                 | 0.0%                          |
| 30   | AN, BN  | -18                 | 0.0%                          |
| 31   | BN, D   | 44                  | 0.0%                          |
| 32   | AN, W   | 101                 | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -205                | 0.0%                          |
| 34             | D, C  | -286                | 0.0%                          |
| 35             | C, C  | 92                  | 0.0%                          |
| 36             | D, BN   | -13                 | 0.0%                          |
| 37             | BN, AN  | -3                  | 0.0%                          |
| 38             | W, W  | -41                 | 0.0%                          |
| 39             | BN, D   | -19                 | 0.0%                          |
| 40             | D, C  | -35                 | 0.0%                          |
| 41             | C, C  | -1                  | 0.0%                          |
| 42             | C, C  | -34                 | 0.0%                          |
| <b>Average</b> |   | <b>-15</b>          | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>114</b>          | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-286</b>         | <b>0.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-147. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 21 (SR21) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -12                 | 0.0%                          |
| 2    | W, W  | 21                  | 0.0%                          |
| 3    | C, C  | -129                | 0.0%                          |
| 4    | C, C  | -74                 | 0.0%                          |
| 5    | AN, W   | -112                | 0.0%                          |
| 6    | BN, AN  | -76                 | 0.0%                          |
| 7    | AN, W   | -60                 | 0.0%                          |
| 8    | D, D  | 37                  | 0.0%                          |
| 9    | W, W  | 30                  | 0.0%                          |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | 9                   | 0.0%                          |
| 12   | D, D  | 0                   | 0.0%                          |
| 13   | W, W  | -64                 | 0.0%                          |
| 14   | D, D  | -45                 | 0.0%                          |
| 15   | C, C  | 290                 | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 119                 | 0.0%                          |
| 17             | C, C  | -176                | 0.0%                          |
| 18             | C, C  | 66                  | 0.0%                          |
| 19             | C, C  | -126                | 0.0%                          |
| 20             | AN, W   | -108                | 0.0%                          |
| 21             | C, C  | 84                  | 0.0%                          |
| 22             | W, W  | 1                   | 0.0%                          |
| 23             | W, W  | 45                  | 0.0%                          |
| 24             | W, W  | 53                  | 0.0%                          |
| 25             | W, W  | 2                   | 0.0%                          |
| 26             | W, AN   | -176                | 0.0%                          |
| 27             | AN, AN  | 171                 | 0.0%                          |
| 28             | D, D  | 1                   | 0.0%                          |
| 29             | D, D  | 9                   | 0.0%                          |
| 30             | AN, BN  | 18                  | 0.0%                          |
| 31             | BN, D   | -3                  | 0.0%                          |
| 32             | AN, W   | -194                | 0.0%                          |
| 33             | W, W  | 103                 | 0.0%                          |
| 34             | D, C  | -56                 | 0.0%                          |
| 35             | C, C  | 36                  | 0.0%                          |
| 36             | D, BN   | 32                  | 0.0%                          |
| 37             | BN, AN  | 97                  | 0.0%                          |
| 38             | W, W  | 135                 | 0.0%                          |
| 39             | BN, D   | -51                 | 0.0%                          |
| 40             | D, C  | 2                   | 0.0%                          |
| 41             | C, C  | -24                 | 0.0%                          |
| 42             | C, C  | 14                  | 0.0%                          |
| <b>Average</b> |   | <b>-3</b>           | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>290</b>          | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-194</b>         | <b>0.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



### I-1.1.8 Changes in Groundwater Pumping, Alternative 4 Compared to No Action Alternative

Table I.1-148 through Table I.1-168 provide the annual simulated groundwater pumping through the model simulation period for each of the 21 model subregions for Alternative 4 compared to the No Action Alternative.

Table I.1-148. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 1 (SR1) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -17                 | 0.0%                          |
| 2    | W, W  | -56                 | -0.1%                         |
| 3    | C, C  | 796                 | 1.3%                          |
| 4    | C, C  | 3,596               | 4.7%                          |
| 5    | AN, W   | -463                | -0.8%                         |
| 6    | BN, AN  | -589                | -1.0%                         |
| 7    | AN, W   | -45                 | -0.1%                         |
| 8    | D, D  | -624                | -1.0%                         |
| 9    | W, W  | -102                | -0.2%                         |
| 10   | W, W  | 23                  | 0.0%                          |
| 11   | W, AN   | -1                  | 0.0%                          |
| 12   | D, D  | 155                 | 0.2%                          |
| 13   | W, W  | -152                | -0.3%                         |
| 14   | D, D  | -816                | -1.1%                         |
| 15   | C, C  | 2,942               | 3.9%                          |
| 16   | D, C  | 334                 | 0.5%                          |
| 17   | C, C  | -1,902              | -2.7%                         |
| 18   | C, C  | 2,760               | 3.3%                          |
| 19   | C, C  | -974                | -1.1%                         |
| 20   | AN, W   | -119                | -0.2%                         |
| 21   | C, C  | -123                | -0.2%                         |
| 22   | W, W  | 94                  | 0.1%                          |
| 23   | W, W  | -127                | -0.2%                         |
| 24   | W, W  | -48                 | -0.1%                         |
| 25   | W, W  | -145                | -0.3%                         |
| 26   | W, AN   | -129                | -0.2%                         |
| 27   | AN, AN  | 53                  | 0.1%                          |
| 28   | D, D  | -383                | -0.6%                         |
| 29   | D, D  | -90                 | -0.1%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 30             | AN, BN  | -144                | -0.2%                         |
| 31             | BN, D   | 83                  | 0.1%                          |
| 32             | AN, W   | -25                 | 0.0%                          |
| 33             | W, W  | -77                 | -0.1%                         |
| 34             | D, C  | 20                  | 0.0%                          |
| 35             | C, C  | 2,086               | 3.0%                          |
| 36             | D, BN   | -1,810              | -2.6%                         |
| 37             | BN, AN  | -527                | -0.9%                         |
| 38             | W, W  | -107                | -0.2%                         |
| 39             | BN, D   | 3                   | 0.0%                          |
| 40             | D, C  | 2,605               | 3.7%                          |
| 41             | C, C  | 4,436               | 5.2%                          |
| 42             | C, C  | 2,766               | 3.1%                          |
| <b>Average</b> |   | <b>313</b>          | <b>0.4%</b>                   |
| <b>Maximum</b> |   | <b>4,436</b>        | <b>5.2%</b>                   |
| <b>Minimum</b> |   | <b>-1,902</b>       | <b>-2.7%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.

Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-149. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 2 (SR2) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 1                   | 0.0%                          |
| 2    | W, W  | -95                 | 0.0%                          |
| 3    | C, C  | 2,744               | 0.5%                          |
| 4    | C, C  | 3,944               | 0.6%                          |
| 5    | AN, W   | 515                 | 0.1%                          |
| 6    | BN, AN  | -8,035              | -1.5%                         |
| 7    | AN, W   | -1,724              | -0.3%                         |
| 8    | D, D  | -1,710              | -0.3%                         |
| 9    | W, W  | -240                | -0.1%                         |
| 10   | W, W  | -8                  | 0.0%                          |
| 11   | W, AN   | -134                | 0.0%                          |
| 12   | D, D  | -1,311              | -0.2%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 13             | W, W  | -524                | -0.1%                         |
| 14             | D, D  | -2,689              | -0.5%                         |
| 15             | C, C  | 8,542               | 1.4%                          |
| 16             | D, C  | -3,018              | -0.5%                         |
| 17             | C, C  | -2,450              | -0.5%                         |
| 18             | C, C  | 3,856               | 0.6%                          |
| 19             | C, C  | -227                | 0.0%                          |
| 20             | AN, W   | -242                | 0.0%                          |
| 21             | C, C  | -2,414              | -0.4%                         |
| 22             | W, W  | -603                | -0.1%                         |
| 23             | W, W  | -29                 | 0.0%                          |
| 24             | W, W  | 0                   | 0.0%                          |
| 25             | W, W  | -8                  | 0.0%                          |
| 26             | W, AN   | -52                 | 0.0%                          |
| 27             | AN, AN  | -44                 | 0.0%                          |
| 28             | D, D  | -3,154              | -0.6%                         |
| 29             | D, D  | -1,113              | -0.2%                         |
| 30             | AN, BN  | -149                | 0.0%                          |
| 31             | BN, D   | -976                | -0.2%                         |
| 32             | AN, W   | -101                | 0.0%                          |
| 33             | W, W  | -8                  | 0.0%                          |
| 34             | D, C  | 190                 | 0.0%                          |
| 35             | C, C  | 4,759               | 0.8%                          |
| 36             | D, BN   | -3,336              | -0.6%                         |
| 37             | BN, AN  | -858                | -0.2%                         |
| 38             | W, W  | 7                   | 0.0%                          |
| 39             | BN, D   | -322                | -0.1%                         |
| 40             | D, C  | 5,320               | 0.9%                          |
| 41             | C, C  | 4,494               | 0.7%                          |
| 42             | C, C  | 2,199               | 0.3%                          |
| <b>Average</b> |   | <b>24</b>           | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>8,542</b>        | <b>1.4%</b>                   |
| <b>Minimum</b> |   | <b>-8,035</b>       | <b>-1.5%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-150. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 3 (SR3) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -27                 | 0.0%                          |
| 2    | W, W  | -1,902              | -0.6%                         |
| 3    | C, C  | 15,217              | 3.4%                          |
| 4    | C, C  | 50,745              | 8.8%                          |
| 5    | AN, W   | 3,257               | 0.9%                          |
| 6    | BN, AN  | -42,980             | -11.3%                        |
| 7    | AN, W   | -8,966              | -2.9%                         |
| 8    | D, D  | -12,863             | -3.6%                         |
| 9    | W, W  | -1,917              | -0.8%                         |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | -1,961              | -0.6%                         |
| 12   | D, D  | -6,647              | -1.7%                         |
| 13   | W, W  | -5,796              | -1.7%                         |
| 14   | D, D  | -14,086             | -3.3%                         |
| 15   | C, C  | 47,026              | 10.5%                         |
| 16   | D, C  | -6,086              | -1.5%                         |
| 17   | C, C  | -20,688             | -4.4%                         |
| 18   | C, C  | 58,401              | 10.9%                         |
| 19   | C, C  | -13,587             | -2.3%                         |
| 20   | AN, W   | -3,273              | -1.0%                         |
| 21   | C, C  | -13,381             | -3.3%                         |
| 22   | W, W  | -2,873              | -0.9%                         |
| 23   | W, W  | -514                | -0.2%                         |
| 24   | W, W  | 0                   | 0.0%                          |
| 25   | W, W  | 0                   | 0.0%                          |
| 26   | W, AN   | -917                | -0.3%                         |
| 27   | AN, AN  | -834                | -0.3%                         |
| 28   | D, D  | -17,071             | -4.6%                         |
| 29   | D, D  | -8,368              | -2.3%                         |
| 30   | AN, BN  | -2,019              | -0.7%                         |
| 31   | BN, D   | -14,423             | -4.2%                         |
| 32   | AN, W   | -2,056              | -0.7%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -330                | -0.1%                         |
| 34             | D, C  | 2,212               | 0.6%                          |
| 35             | C, C  | 25,996              | 6.3%                          |
| 36             | D, BN   | -17,971             | -4.0%                         |
| 37             | BN, AN  | -4,760              | -1.7%                         |
| 38             | W, W  | 0                   | 0.0%                          |
| 39             | BN, D   | -1,543              | -0.4%                         |
| 40             | D, C  | 27,915              | 6.8%                          |
| 41             | C, C  | 49,578              | 8.5%                          |
| 42             | C, C  | 54,395              | 9.2%                          |
| <b>Average</b> |   | <b>2,545</b>        | <b>0.2%</b>                   |
| <b>Maximum</b> |   | <b>58,401</b>       | <b>10.9%</b>                  |
| <b>Minimum</b> |   | <b>-42,980</b>      | <b>-11.3%</b>                 |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-151. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 4 (SR4) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 0                   | 0.0%                          |
| 2    | W, W  | -1,095              | -0.3%                         |
| 3    | C, C  | 65                  | 0.0%                          |
| 4    | C, C  | 15,630              | 4.2%                          |
| 5    | AN, W   | -279                | -0.1%                         |
| 6    | BN, AN  | 951                 | 0.3%                          |
| 7    | AN, W   | -7,253              | -2.2%                         |
| 8    | D, D  | -54                 | 0.0%                          |
| 9    | W, W  | 8,396               | 2.8%                          |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | -11                 | 0.0%                          |
| 12   | D, D  | -15                 | 0.0%                          |
| 13   | W, W  | -16                 | 0.0%                          |
| 14   | D, D  | -26                 | 0.0%                          |
| 15   | C, C  | 67                  | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -1,089              | -0.3%                         |
| 17             | C, C  | -8,303              | -2.6%                         |
| 18             | C, C  | 17,244              | 5.2%                          |
| 19             | C, C  | -11,156             | -3.1%                         |
| 20             | AN, W   | 75                  | 0.0%                          |
| 21             | C, C  | -1,097              | -0.3%                         |
| 22             | W, W  | -6                  | 0.0%                          |
| 23             | W, W  | -681                | -0.2%                         |
| 24             | W, W  | 0                   | 0.0%                          |
| 25             | W, W  | 0                   | 0.0%                          |
| 26             | W, AN   | -16                 | 0.0%                          |
| 27             | AN, AN  | 2,488               | 0.8%                          |
| 28             | D, D  | -11                 | 0.0%                          |
| 29             | D, D  | -28                 | 0.0%                          |
| 30             | AN, BN  | 1,468               | 0.4%                          |
| 31             | BN, D   | -1,700              | -0.5%                         |
| 32             | AN, W   | -13                 | 0.0%                          |
| 33             | W, W  | 974                 | 0.3%                          |
| 34             | D, C  | -24                 | 0.0%                          |
| 35             | C, C  | -20                 | 0.0%                          |
| 36             | D, BN   | -1,018              | -0.3%                         |
| 37             | BN, AN  | -32                 | 0.0%                          |
| 38             | W, W  | -442                | -0.1%                         |
| 39             | BN, D   | 6                   | 0.0%                          |
| 40             | D, C  | 12                  | 0.0%                          |
| 41             | C, C  | 16,279              | 4.3%                          |
| 42             | C, C  | 16,301              | 4.4%                          |
| <b>Average</b> |   | <b>1,085</b>        | <b>0.3%</b>                   |
| <b>Maximum</b> |   | <b>17,244</b>       | <b>5.2%</b>                   |
| <b>Minimum</b> |   | <b>-11,156</b>      | <b>-3.1%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-152. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 5 (SR5) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 74                  | 0.0%                          |
| 2    | W, W  | 117                 | 0.0%                          |
| 3    | C, C  | 926                 | 0.2%                          |
| 4    | C, C  | -364                | -0.1%                         |
| 5    | AN, W   | -11,956             | -2.6%                         |
| 6    | BN, AN  | -3,476              | -0.8%                         |
| 7    | AN, W   | -458                | -0.1%                         |
| 8    | D, D  | -879                | -0.2%                         |
| 9    | W, W  | -21                 | 0.0%                          |
| 10   | W, W  | -22                 | 0.0%                          |
| 11   | W, AN   | -73                 | 0.0%                          |
| 12   | D, D  | -1,281              | -0.3%                         |
| 13   | W, W  | 75                  | 0.0%                          |
| 14   | D, D  | -969                | -0.2%                         |
| 15   | C, C  | 3,697               | 0.8%                          |
| 16   | D, C  | -12,575             | -2.7%                         |
| 17   | C, C  | 456                 | 0.1%                          |
| 18   | C, C  | 4                   | 0.0%                          |
| 19   | C, C  | -508                | -0.1%                         |
| 20   | AN, W   | 2,004               | 0.5%                          |
| 21   | C, C  | -1,018              | -0.2%                         |
| 22   | W, W  | -182                | 0.0%                          |
| 23   | W, W  | 20                  | 0.0%                          |
| 24   | W, W  | -76                 | 0.0%                          |
| 25   | W, W  | -25                 | 0.0%                          |
| 26   | W, AN   | -201                | -0.1%                         |
| 27   | AN, AN  | 158                 | 0.0%                          |
| 28   | D, D  | -1,399              | -0.3%                         |
| 29   | D, D  | -521                | -0.1%                         |
| 30   | AN, BN  | -391                | -0.1%                         |
| 31   | BN, D   | 52                  | 0.0%                          |
| 32   | AN, W   | 121                 | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 38                  | 0.0%                          |
| 34             | D, C  | 28                  | 0.0%                          |
| 35             | C, C  | 1,894               | 0.4%                          |
| 36             | D, BN   | -1,544              | -0.3%                         |
| 37             | BN, AN  | -307                | -0.1%                         |
| 38             | W, W  | -8                  | 0.0%                          |
| 39             | BN, D   | -204                | 0.0%                          |
| 40             | D, C  | 2,025               | 0.4%                          |
| 41             | C, C  | 649                 | 0.1%                          |
| 42             | C, C  | -561                | -0.1%                         |
| <b>Average</b> |   | <b>-635</b>         | <b>-0.1%</b>                  |
| <b>Maximum</b> |   | <b>3,697</b>        | <b>0.8%</b>                   |
| <b>Minimum</b> |   | <b>-12,575</b>      | <b>-2.7%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-153. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 6 (SR6) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -43                 | 0.0%                          |
| 2    | W, W  | 1,212               | 0.2%                          |
| 3    | C, C  | -311                | 0.0%                          |
| 4    | C, C  | -12                 | 0.0%                          |
| 5    | AN, W   | 75                  | 0.0%                          |
| 6    | BN, AN  | -964                | -0.1%                         |
| 7    | AN, W   | -241                | 0.0%                          |
| 8    | D, D  | -1,909              | -0.3%                         |
| 9    | W, W  | 756                 | 0.1%                          |
| 10   | W, W  | -246                | 0.0%                          |
| 11   | W, AN   | 235                 | 0.0%                          |
| 12   | D, D  | 1,056               | 0.1%                          |
| 13   | W, W  | 7                   | 0.0%                          |
| 14   | D, D  | -2,143              | -0.3%                         |
| 15   | C, C  | 2,383               | 0.3%                          |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -828                | -0.1%                         |
| 17             | C, C  | -5,089              | -0.6%                         |
| 18             | C, C  | -1,572              | -0.2%                         |
| 19             | C, C  | -374                | 0.0%                          |
| 20             | AN, W   | 305                 | 0.0%                          |
| 21             | C, C  | -260                | 0.0%                          |
| 22             | W, W  | -320                | 0.0%                          |
| 23             | W, W  | 20                  | 0.0%                          |
| 24             | W, W  | -263                | 0.0%                          |
| 25             | W, W  | 291                 | 0.0%                          |
| 26             | W, AN   | 96                  | 0.0%                          |
| 27             | AN, AN  | 278                 | 0.0%                          |
| 28             | D, D  | 44                  | 0.0%                          |
| 29             | D, D  | -216                | 0.0%                          |
| 30             | AN, BN  | 1,146               | 0.2%                          |
| 31             | BN, D   | 570                 | 0.1%                          |
| 32             | AN, W   | -248                | 0.0%                          |
| 33             | W, W  | 91                  | 0.0%                          |
| 34             | D, C  | -631                | -0.1%                         |
| 35             | C, C  | 603                 | 0.1%                          |
| 36             | D, BN   | 981                 | 0.1%                          |
| 37             | BN, AN  | -158                | 0.0%                          |
| 38             | W, W  | 669                 | 0.1%                          |
| 39             | BN, D   | -114                | 0.0%                          |
| 40             | D, C  | 795                 | 0.1%                          |
| 41             | C, C  | -1,356              | -0.2%                         |
| 42             | C, C  | 530                 | 0.1%                          |
| <b>Average</b> |   | <b>-123</b>         | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>2,383</b>        | <b>0.3%</b>                   |
| <b>Minimum</b> |   | <b>-5,089</b>       | <b>-0.6%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-154. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 7 (SR7) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 307                 | 0.1%                          |
| 2    | W, W  | 578                 | 0.2%                          |
| 3    | C, C  | -190                | -0.1%                         |
| 4    | C, C  | -4,822              | -1.1%                         |
| 5    | AN, W   | -670                | -0.2%                         |
| 6    | BN, AN  | 1,543               | 0.4%                          |
| 7    | AN, W   | 967                 | 0.3%                          |
| 8    | D, D  | -261                | -0.1%                         |
| 9    | W, W  | -190                | -0.1%                         |
| 10   | W, W  | -676                | -0.2%                         |
| 11   | W, AN   | -708                | -0.2%                         |
| 12   | D, D  | 518                 | 0.1%                          |
| 13   | W, W  | 791                 | 0.2%                          |
| 14   | D, D  | 315                 | 0.1%                          |
| 15   | C, C  | -172                | 0.0%                          |
| 16   | D, C  | -119                | 0.0%                          |
| 17   | C, C  | -3,787              | -1.1%                         |
| 18   | C, C  | -3,034              | -0.8%                         |
| 19   | C, C  | -5,893              | -1.5%                         |
| 20   | AN, W   | -248                | -0.1%                         |
| 21   | C, C  | 269                 | 0.1%                          |
| 22   | W, W  | -29                 | 0.0%                          |
| 23   | W, W  | 370                 | 0.1%                          |
| 24   | W, W  | -528                | -0.1%                         |
| 25   | W, W  | 2,246               | 0.6%                          |
| 26   | W, AN   | 553                 | 0.2%                          |
| 27   | AN, AN  | 225                 | 0.1%                          |
| 28   | D, D  | -172                | 0.0%                          |
| 29   | D, D  | -600                | -0.2%                         |
| 30   | AN, BN  | -176                | 0.0%                          |
| 31   | BN, D   | 420                 | 0.1%                          |
| 32   | AN, W   | -253                | -0.1%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -300                | -0.1%                         |
| 34             | D, C  | -933                | -0.2%                         |
| 35             | C, C  | 128                 | 0.0%                          |
| 36             | D, BN   | -293                | -0.1%                         |
| 37             | BN, AN  | 643                 | 0.2%                          |
| 38             | W, W  | -388                | -0.1%                         |
| 39             | BN, D   | 209                 | 0.1%                          |
| 40             | D, C  | 54                  | 0.0%                          |
| 41             | C, C  | -5,561              | -1.4%                         |
| 42             | C, C  | -5,028              | -1.2%                         |
| <b>Average</b> |   | <b>-593</b>         | <b>-0.1%</b>                  |
| <b>Maximum</b> |   | <b>2,246</b>        | <b>0.6%</b>                   |
| <b>Minimum</b> |   | <b>-5,893</b>       | <b>-1.5%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-155. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 8 (SR8) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -603                | -0.1%                         |
| 2    | W, W  | -198                | 0.0%                          |
| 3    | C, C  | -536                | 0.0%                          |
| 4    | C, C  | -241                | 0.0%                          |
| 5    | AN, W   | 154                 | 0.0%                          |
| 6    | BN, AN  | -91                 | 0.0%                          |
| 7    | AN, W   | 522                 | 0.1%                          |
| 8    | D, D  | -180                | 0.0%                          |
| 9    | W, W  | 417                 | 0.1%                          |
| 10   | W, W  | 26                  | 0.0%                          |
| 11   | W, AN   | -52                 | 0.0%                          |
| 12   | D, D  | -106                | 0.0%                          |
| 13   | W, W  | -49                 | 0.0%                          |
| 14   | D, D  | 23                  | 0.0%                          |
| 15   | C, C  | -43                 | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 118                 | 0.0%                          |
| 17             | C, C  | -66                 | 0.0%                          |
| 18             | C, C  | 63                  | 0.0%                          |
| 19             | C, C  | 221                 | 0.0%                          |
| 20             | AN, W   | -159                | 0.0%                          |
| 21             | C, C  | -924                | -0.1%                         |
| 22             | W, W  | -109                | 0.0%                          |
| 23             | W, W  | -153                | 0.0%                          |
| 24             | W, W  | -1,389              | -0.1%                         |
| 25             | W, W  | -115                | 0.0%                          |
| 26             | W, AN   | 103                 | 0.0%                          |
| 27             | AN, AN  | -182                | 0.0%                          |
| 28             | D, D  | -154                | 0.0%                          |
| 29             | D, D  | 197                 | 0.0%                          |
| 30             | AN, BN  | 450                 | 0.0%                          |
| 31             | BN, D   | -91                 | 0.0%                          |
| 32             | AN, W   | -403                | 0.0%                          |
| 33             | W, W  | -763                | -0.1%                         |
| 34             | D, C  | 353                 | 0.0%                          |
| 35             | C, C  | 142                 | 0.0%                          |
| 36             | D, BN   | -109                | 0.0%                          |
| 37             | BN, AN  | -348                | 0.0%                          |
| 38             | W, W  | 217                 | 0.0%                          |
| 39             | BN, D   | 484                 | 0.0%                          |
| 40             | D, C  | 207                 | 0.0%                          |
| 41             | C, C  | -131                | 0.0%                          |
| 42             | C, C  | 188                 | 0.0%                          |
| <b>Average</b> |   | <b>-79</b>          | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>522</b>          | <b>0.1%</b>                   |
| <b>Minimum</b> |   | <b>-1,389</b>       | <b>-0.1%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-156. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 9 (SR9) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 80                  | 0.0%                          |
| 2    | W, W  | -3,681              | -0.7%                         |
| 3    | C, C  | -426                | -0.1%                         |
| 4    | C, C  | 379                 | 0.1%                          |
| 5    | AN, W   | -235                | 0.0%                          |
| 6    | BN, AN  | -2,867              | -0.5%                         |
| 7    | AN, W   | -814                | -0.2%                         |
| 8    | D, D  | -45                 | 0.0%                          |
| 9    | W, W  | 3                   | 0.0%                          |
| 10   | W, W  | -87                 | 0.0%                          |
| 11   | W, AN   | -1,123              | -0.2%                         |
| 12   | D, D  | 151                 | 0.0%                          |
| 13   | W, W  | -477                | -0.1%                         |
| 14   | D, D  | -55                 | 0.0%                          |
| 15   | C, C  | 2,106               | 0.4%                          |
| 16   | D, C  | 2,041               | 0.4%                          |
| 17   | C, C  | 158                 | 0.0%                          |
| 18   | C, C  | -56                 | 0.0%                          |
| 19   | C, C  | -136                | 0.0%                          |
| 20   | AN, W   | -4,584              | -0.9%                         |
| 21   | C, C  | -21                 | 0.0%                          |
| 22   | W, W  | 4                   | 0.0%                          |
| 23   | W, W  | 40                  | 0.0%                          |
| 24   | W, W  | -3,042              | -0.6%                         |
| 25   | W, W  | -53                 | 0.0%                          |
| 26   | W, AN   | -574                | -0.1%                         |
| 27   | AN, AN  | -3,937              | -0.8%                         |
| 28   | D, D  | -727                | -0.1%                         |
| 29   | D, D  | 525                 | 0.1%                          |
| 30   | AN, BN  | 535                 | 0.1%                          |
| 31   | BN, D   | -1,393              | -0.3%                         |
| 32   | AN, W   | -540                | -0.1%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -381                | -0.1%                         |
| 34             | D, C  | 395                 | 0.1%                          |
| 35             | C, C  | 1,293               | 0.2%                          |
| 36             | D, BN   | 1,141               | 0.2%                          |
| 37             | BN, AN  | 10                  | 0.0%                          |
| 38             | W, W  | -233                | 0.0%                          |
| 39             | BN, D   | -770                | -0.1%                         |
| 40             | D, C  | 1,719               | 0.3%                          |
| 41             | C, C  | 390                 | 0.1%                          |
| 42             | C, C  | -192                | 0.0%                          |
| <b>Average</b> |   | <b>-369</b>         | <b>-0.1%</b>                  |
| <b>Maximum</b> |   | <b>2,106</b>        | <b>0.4%</b>                   |
| <b>Minimum</b> |   | <b>-4,584</b>       | <b>-0.9%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-157. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 10 (SR10) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -1,972              | -0.7%                         |
| 2    | W, W  | -44,032             | -11.9%                        |
| 3    | C, C  | -13,854             | -2.7%                         |
| 4    | C, C  | -32,923             | -4.1%                         |
| 5    | AN, W   | -2,591              | -0.7%                         |
| 6    | BN, AN  | -34,144             | -8.5%                         |
| 7    | AN, W   | -11,600             | -3.8%                         |
| 8    | D, D  | 1,208               | 0.3%                          |
| 9    | W, W  | 959                 | 0.3%                          |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | -11,383             | -3.7%                         |
| 12   | D, D  | 13                  | 0.0%                          |
| 13   | W, W  | -1,446              | -0.5%                         |
| 14   | D, D  | -1,875              | -0.4%                         |
| 15   | C, C  | 26,644              | 5.1%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 13,274              | 2.4%                          |
| 17             | C, C  | 2,693               | 0.4%                          |
| 18             | C, C  | -12,240             | -1.6%                         |
| 19             | C, C  | 1,107               | 0.1%                          |
| 20             | AN, W   | -46,804             | -11.2%                        |
| 21             | C, C  | -622                | -0.1%                         |
| 22             | W, W  | 1,957               | 0.6%                          |
| 23             | W, W  | -3,769              | -1.2%                         |
| 24             | W, W  | -10,138             | -3.3%                         |
| 25             | W, W  | -206                | -0.1%                         |
| 26             | W, AN   | -7,039              | -2.5%                         |
| 27             | AN, AN  | -50,060             | -12.7%                        |
| 28             | D, D  | -8,736              | -1.9%                         |
| 29             | D, D  | 6,237               | 1.3%                          |
| 30             | AN, BN  | 6,659               | 1.6%                          |
| 31             | BN, D   | -7,568              | -1.6%                         |
| 32             | AN, W   | -7,677              | -2.5%                         |
| 33             | W, W  | -4,780              | -1.6%                         |
| 34             | D, C  | -100                | 0.0%                          |
| 35             | C, C  | 17,398              | 3.6%                          |
| 36             | D, BN   | 14,038              | 2.5%                          |
| 37             | BN, AN  | -4,820              | -1.1%                         |
| 38             | W, W  | -2,694              | -0.9%                         |
| 39             | BN, D   | -17,605             | -4.6%                         |
| 40             | D, C  | 18,020              | 4.0%                          |
| 41             | C, C  | -48,598             | -6.3%                         |
| 42             | C, C  | -1,071              | -0.1%                         |
| <b>Average</b> |   | <b>-6,670</b>       | <b>-1.6%</b>                  |
| <b>Maximum</b> |   | <b>26,644</b>       | <b>5.1%</b>                   |
| <b>Minimum</b> |   | <b>-50,060</b>      | <b>-12.7%</b>                 |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-158. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 11 (SR11) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -17                 | 0.0%                          |
| 2    | W, W  | -3                  | 0.0%                          |
| 3    | C, C  | -3,404              | -0.8%                         |
| 4    | C, C  | -133                | 0.0%                          |
| 5    | AN, W   | -32                 | 0.0%                          |
| 6    | BN, AN  | -3                  | 0.0%                          |
| 7    | AN, W   | 6                   | 0.0%                          |
| 8    | D, D  | -3,289              | -0.9%                         |
| 9    | W, W  | -64                 | 0.0%                          |
| 10   | W, W  | 7                   | 0.0%                          |
| 11   | W, AN   | 19                  | 0.0%                          |
| 12   | D, D  | -5                  | 0.0%                          |
| 13   | W, W  | 4                   | 0.0%                          |
| 14   | D, D  | -19                 | 0.0%                          |
| 15   | C, C  | -55                 | 0.0%                          |
| 16   | D, C  | 7                   | 0.0%                          |
| 17   | C, C  | -128                | 0.0%                          |
| 18   | C, C  | -8                  | 0.0%                          |
| 19   | C, C  | -451                | -0.1%                         |
| 20   | AN, W   | -1,454              | -0.4%                         |
| 21   | C, C  | 245                 | 0.1%                          |
| 22   | W, W  | 203                 | 0.1%                          |
| 23   | W, W  | 165                 | 0.1%                          |
| 24   | W, W  | 9,666               | 3.0%                          |
| 25   | W, W  | 7,573               | 3.0%                          |
| 26   | W, AN   | 23                  | 0.0%                          |
| 27   | AN, AN  | 30                  | 0.0%                          |
| 28   | D, D  | 104                 | 0.0%                          |
| 29   | D, D  | 35                  | 0.0%                          |
| 30   | AN, BN  | 110                 | 0.0%                          |
| 31   | BN, D   | -351                | -0.1%                         |
| 32   | AN, W   | 12,275              | 4.6%                          |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 176                 | 0.1%                          |
| 34             | D, C  | -62                 | 0.0%                          |
| 35             | C, C  | 65                  | 0.0%                          |
| 36             | D, BN   | -125                | 0.0%                          |
| 37             | BN, AN  | -191                | -0.1%                         |
| 38             | W, W  | -14                 | 0.0%                          |
| 39             | BN, D   | 100                 | 0.0%                          |
| 40             | D, C  | 280                 | 0.1%                          |
| 41             | C, C  | -172                | 0.0%                          |
| 42             | C, C  | -49                 | 0.0%                          |
| <b>Average</b> |   | <b>502</b>          | <b>0.2%</b>                   |
| <b>Maximum</b> |   | <b>12,275</b>       | <b>4.6%</b>                   |
| <b>Minimum</b> |   | <b>-3,404</b>       | <b>-0.9%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-159. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 12 (SR12) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 30                  | 0.0%                          |
| 2    | W, W  | 58                  | 0.0%                          |
| 3    | C, C  | 7                   | 0.0%                          |
| 4    | C, C  | 218                 | 0.0%                          |
| 5    | AN, W   | 106                 | 0.0%                          |
| 6    | BN, AN  | -23                 | 0.0%                          |
| 7    | AN, W   | 77                  | 0.0%                          |
| 8    | D, D  | -71                 | 0.0%                          |
| 9    | W, W  | 18                  | 0.0%                          |
| 10   | W, W  | -90                 | 0.0%                          |
| 11   | W, AN   | -247                | 0.0%                          |
| 12   | D, D  | -267                | 0.0%                          |
| 13   | W, W  | 35                  | 0.0%                          |
| 14   | D, D  | -40                 | 0.0%                          |
| 15   | C, C  | -324                | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 134                 | 0.0%                          |
| 17             | C, C  | -17                 | 0.0%                          |
| 18             | C, C  | -94                 | 0.0%                          |
| 19             | C, C  | -244                | 0.0%                          |
| 20             | AN, W   | -4,282              | -0.7%                         |
| 21             | C, C  | 1,226               | 0.2%                          |
| 22             | W, W  | 402                 | 0.1%                          |
| 23             | W, W  | -74                 | 0.0%                          |
| 24             | W, W  | 4                   | 0.0%                          |
| 25             | W, W  | -141                | 0.0%                          |
| 26             | W, AN   | 6                   | 0.0%                          |
| 27             | AN, AN  | 53                  | 0.0%                          |
| 28             | D, D  | -44                 | 0.0%                          |
| 29             | D, D  | -51                 | 0.0%                          |
| 30             | AN, BN  | 87                  | 0.0%                          |
| 31             | BN, D   | -71                 | 0.0%                          |
| 32             | AN, W   | -65                 | 0.0%                          |
| 33             | W, W  | -12                 | 0.0%                          |
| 34             | D, C  | -13                 | 0.0%                          |
| 35             | C, C  | 97                  | 0.0%                          |
| 36             | D, BN   | -62                 | 0.0%                          |
| 37             | BN, AN  | -234                | -0.1%                         |
| 38             | W, W  | 29                  | 0.0%                          |
| 39             | BN, D   | 40                  | 0.0%                          |
| 40             | D, C  | 34                  | 0.0%                          |
| 41             | C, C  | -797                | -0.1%                         |
| 42             | C, C  | 171                 | 0.0%                          |
| <b>Average</b> |   | <b>-106</b>         | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>1,226</b>        | <b>0.2%</b>                   |
| <b>Minimum</b> |   | <b>-4,282</b>       | <b>-0.7%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-160. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 13 (SR13) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 304                 | 0.0%                          |
| 2    | W, W  | -569                | 0.0%                          |
| 3    | C, C  | -417                | 0.0%                          |
| 4    | C, C  | -3,243              | -0.1%                         |
| 5    | AN, W   | -214                | 0.0%                          |
| 6    | BN, AN  | 228                 | 0.0%                          |
| 7    | AN, W   | 41                  | 0.0%                          |
| 8    | D, D  | 146                 | 0.0%                          |
| 9    | W, W  | 5                   | 0.0%                          |
| 10   | W, W  | 132                 | 0.0%                          |
| 11   | W, AN   | 150                 | 0.0%                          |
| 12   | D, D  | -740                | 0.0%                          |
| 13   | W, W  | -8                  | 0.0%                          |
| 14   | D, D  | -9                  | 0.0%                          |
| 15   | C, C  | 164                 | 0.0%                          |
| 16   | D, C  | 833                 | 0.0%                          |
| 17   | C, C  | -544                | 0.0%                          |
| 18   | C, C  | -1,442              | -0.1%                         |
| 19   | C, C  | 64                  | 0.0%                          |
| 20   | AN, W   | 34                  | 0.0%                          |
| 21   | C, C  | 134                 | 0.0%                          |
| 22   | W, W  | 131                 | 0.0%                          |
| 23   | W, W  | 414                 | 0.0%                          |
| 24   | W, W  | -346                | 0.0%                          |
| 25   | W, W  | -301                | 0.0%                          |
| 26   | W, AN   | 180                 | 0.0%                          |
| 27   | AN, AN  | 24                  | 0.0%                          |
| 28   | D, D  | 75                  | 0.0%                          |
| 29   | D, D  | -380                | 0.0%                          |
| 30   | AN, BN  | -271                | 0.0%                          |
| 31   | BN, D   | 501                 | 0.0%                          |
| 32   | AN, W   | -147                | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -429                | 0.0%                          |
| 34             | D, C  | 97                  | 0.0%                          |
| 35             | C, C  | 336                 | 0.0%                          |
| 36             | D, BN   | 151                 | 0.0%                          |
| 37             | BN, AN  | 803                 | 0.1%                          |
| 38             | W, W  | 152                 | 0.0%                          |
| 39             | BN, D   | -84                 | 0.0%                          |
| 40             | D, C  | -834                | 0.0%                          |
| 41             | C, C  | -5,162              | -0.2%                         |
| 42             | C, C  | 518                 | 0.0%                          |
| <b>Average</b> |   | <b>-227</b>         | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>833</b>          | <b>0.1%</b>                   |
| <b>Minimum</b> |   | <b>-5,162</b>       | <b>-0.2%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-161. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 14 (SR14) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -4,214              | -1.9%                         |
| 2    | W, W  | -117,362            | -35.1%                        |
| 3    | C, C  | -20,697             | -3.2%                         |
| 4    | C, C  | 17,084              | 1.4%                          |
| 5    | AN, W   | -4,555              | -1.2%                         |
| 6    | BN, AN  | -91,228             | -19.1%                        |
| 7    | AN, W   | -25,870             | -10.6%                        |
| 8    | D, D  | 7,068               | 1.5%                          |
| 9    | W, W  | 3,518               | 1.2%                          |
| 10   | W, W  | 3                   | 0.0%                          |
| 11   | W, AN   | -9,859              | -5.1%                         |
| 12   | D, D  | 14,322              | 2.9%                          |
| 13   | W, W  | 178                 | 0.1%                          |
| 14   | D, D  | 1,896               | 0.4%                          |
| 15   | C, C  | 82,083              | 11.4%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 42,460              | 5.7%                          |
| 17             | C, C  | 10,800              | 1.0%                          |
| 18             | C, C  | -219                | 0.0%                          |
| 19             | C, C  | -170                | 0.0%                          |
| 20             | AN, W   | -137,184            | -22.4%                        |
| 21             | C, C  | -1,286              | -0.2%                         |
| 22             | W, W  | -7,390              | -2.1%                         |
| 23             | W, W  | -7,741              | -2.8%                         |
| 24             | W, W  | -43,020             | -16.4%                        |
| 25             | W, W  | -111                | -0.1%                         |
| 26             | W, AN   | -14,740             | -6.1%                         |
| 27             | AN, AN  | -151,343            | -25.7%                        |
| 28             | D, D  | -24,420             | -3.2%                         |
| 29             | D, D  | 21,095              | 2.7%                          |
| 30             | AN, BN  | 30,239              | 4.7%                          |
| 31             | BN, D   | 27,812              | 3.9%                          |
| 32             | AN, W   | -28,173             | -8.1%                         |
| 33             | W, W  | -7,089              | -3.2%                         |
| 34             | D, C  | 19,451              | 3.3%                          |
| 35             | C, C  | 57,519              | 6.6%                          |
| 36             | D, BN   | 51,602              | 4.3%                          |
| 37             | BN, AN  | -15,670             | -2.0%                         |
| 38             | W, W  | -6,324              | -2.2%                         |
| 39             | BN, D   | -53,833             | -12.3%                        |
| 40             | D, C  | 66,061              | 8.5%                          |
| 41             | C, C  | 44,377              | 3.6%                          |
| 42             | C, C  | -119                | 0.0%                          |
| <b>Average</b> |   | <b>-6,549</b>       | <b>-2.9%</b>                  |
| <b>Maximum</b> |   | <b>82,083</b>       | <b>11.4%</b>                  |
| <b>Minimum</b> |   | <b>-151,343</b>     | <b>-35.1%</b>                 |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-162. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 15 (SR15) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -3,055              | -0.2%                         |
| 2    | W, W  | -10,674             | -0.8%                         |
| 3    | C, C  | -1,280              | -0.1%                         |
| 4    | C, C  | -4,377              | -0.2%                         |
| 5    | AN, W   | -3,444              | -0.3%                         |
| 6    | BN, AN  | -9,242              | -0.7%                         |
| 7    | AN, W   | -5,736              | -0.5%                         |
| 8    | D, D  | -4,546              | -0.3%                         |
| 9    | W, W  | -6,596              | -0.6%                         |
| 10   | W, W  | -42                 | 0.0%                          |
| 11   | W, AN   | -1,276              | -0.1%                         |
| 12   | D, D  | -9,648              | -0.6%                         |
| 13   | W, W  | -1,206              | -0.1%                         |
| 14   | D, D  | -6,260              | -0.4%                         |
| 15   | C, C  | 6,193               | 0.3%                          |
| 16   | D, C  | -6,887              | -0.4%                         |
| 17   | C, C  | 247                 | 0.0%                          |
| 18   | C, C  | -8,474              | -0.5%                         |
| 19   | C, C  | -106                | 0.0%                          |
| 20   | AN, W   | -6,764              | -0.5%                         |
| 21   | C, C  | -5,202              | -0.3%                         |
| 22   | W, W  | -1,383              | -0.1%                         |
| 23   | W, W  | -7,832              | -0.6%                         |
| 24   | W, W  | -2,927              | -0.2%                         |
| 25   | W, W  | -1,484              | -0.1%                         |
| 26   | W, AN   | 88                  | 0.0%                          |
| 27   | AN, AN  | -11,537             | -0.8%                         |
| 28   | D, D  | -5,479              | -0.3%                         |
| 29   | D, D  | -9,723              | -0.6%                         |
| 30   | AN, BN  | 3,461               | 0.2%                          |
| 31   | BN, D   | -12,925             | -0.8%                         |
| 32   | AN, W   | -6,517              | -0.5%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -1,438              | -0.1%                         |
| 34             | D, C  | -9,541              | -0.6%                         |
| 35             | C, C  | -4,778              | -0.3%                         |
| 36             | D, BN   | -984                | -0.1%                         |
| 37             | BN, AN  | -3,219              | -0.2%                         |
| 38             | W, W  | -6,132              | -0.5%                         |
| 39             | BN, D   | 4,830               | 0.3%                          |
| 40             | D, C  | 1,145               | 0.1%                          |
| 41             | C, C  | -4,415              | -0.2%                         |
| 42             | C, C  | -1,962              | -0.1%                         |
| <b>Average</b> |   | <b>-4,074</b>       | <b>-0.3%</b>                  |
| <b>Maximum</b> |   | <b>6,193</b>        | <b>0.3%</b>                   |
| <b>Minimum</b> |   | <b>-12,925</b>      | <b>-0.8%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-163. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 16 (SR16) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -56                 | -0.1%                         |
| 2    | W, W  | 0                   | 0.0%                          |
| 3    | C, C  | -9                  | 0.0%                          |
| 4    | C, C  | 73                  | 0.0%                          |
| 5    | AN, W   | -6                  | 0.0%                          |
| 6    | BN, AN  | -34                 | -0.1%                         |
| 7    | AN, W   | 1                   | 0.0%                          |
| 8    | D, D  | 13                  | 0.0%                          |
| 9    | W, W  | 5                   | 0.0%                          |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | 8                   | 0.0%                          |
| 12   | D, D  | 0                   | 0.0%                          |
| 13   | W, W  | -9                  | 0.0%                          |
| 14   | D, D  | 51                  | 0.0%                          |
| 15   | C, C  | 109                 | 0.1%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -26                 | 0.0%                          |
| 17             | C, C  | 62                  | 0.0%                          |
| 18             | C, C  | -44                 | 0.0%                          |
| 19             | C, C  | 19                  | 0.0%                          |
| 20             | AN, W   | 0                   | 0.0%                          |
| 21             | C, C  | 0                   | 0.0%                          |
| 22             | W, W  | -43                 | 0.0%                          |
| 23             | W, W  | 0                   | 0.0%                          |
| 24             | W, W  | 8                   | 0.0%                          |
| 25             | W, W  | 0                   | 0.0%                          |
| 26             | W, AN   | 0                   | 0.0%                          |
| 27             | AN, AN  | -50                 | 0.0%                          |
| 28             | D, D  | -18                 | 0.0%                          |
| 29             | D, D  | -68                 | 0.0%                          |
| 30             | AN, BN  | 58                  | 0.0%                          |
| 31             | BN, D   | 23                  | 0.0%                          |
| 32             | AN, W   | 0                   | 0.0%                          |
| 33             | W, W  | 39                  | 0.1%                          |
| 34             | D, C  | 15                  | 0.0%                          |
| 35             | C, C  | -29                 | 0.0%                          |
| 36             | D, BN   | 26                  | 0.0%                          |
| 37             | BN, AN  | -72                 | 0.0%                          |
| 38             | W, W  | 0                   | 0.0%                          |
| 39             | BN, D   | 1                   | 0.0%                          |
| 40             | D, C  | -17                 | 0.0%                          |
| 41             | C, C  | 31                  | 0.0%                          |
| 42             | C, C  | 10                  | 0.0%                          |
| <b>Average</b> |   | <b>2</b>            | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>109</b>          | <b>0.1%</b>                   |
| <b>Minimum</b> |   | <b>-72</b>          | <b>-0.1%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-164. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 17 (SR17) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 20                  | 0.0%                          |
| 2    | W, W  | -43                 | 0.0%                          |
| 3    | C, C  | -10                 | 0.0%                          |
| 4    | C, C  | 29                  | 0.0%                          |
| 5    | AN, W   | -79                 | 0.0%                          |
| 6    | BN, AN  | 11                  | 0.0%                          |
| 7    | AN, W   | -54                 | 0.0%                          |
| 8    | D, D  | -32                 | 0.0%                          |
| 9    | W, W  | -2                  | 0.0%                          |
| 10   | W, W  | 5                   | 0.0%                          |
| 11   | W, AN   | 26                  | 0.0%                          |
| 12   | D, D  | -12                 | 0.0%                          |
| 13   | W, W  | -115                | -0.1%                         |
| 14   | D, D  | -62                 | 0.0%                          |
| 15   | C, C  | -84                 | 0.0%                          |
| 16   | D, C  | -152                | 0.0%                          |
| 17   | C, C  | 104                 | 0.0%                          |
| 18   | C, C  | 48                  | 0.0%                          |
| 19   | C, C  | -143                | 0.0%                          |
| 20   | AN, W   | 74                  | 0.0%                          |
| 21   | C, C  | -82                 | 0.0%                          |
| 22   | W, W  | -7                  | 0.0%                          |
| 23   | W, W  | -50                 | 0.0%                          |
| 24   | W, W  | 129                 | 0.0%                          |
| 25   | W, W  | -77                 | 0.0%                          |
| 26   | W, AN   | 57                  | 0.0%                          |
| 27   | AN, AN  | -50                 | 0.0%                          |
| 28   | D, D  | 22                  | 0.0%                          |
| 29   | D, D  | -36                 | 0.0%                          |
| 30   | AN, BN  | -68                 | 0.0%                          |
| 31   | BN, D   | 123                 | 0.0%                          |
| 32   | AN, W   | -32                 | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -85                 | 0.0%                          |
| 34             | D, C  | 47                  | 0.0%                          |
| 35             | C, C  | -56                 | 0.0%                          |
| 36             | D, BN   | 14                  | 0.0%                          |
| 37             | BN, AN  | -71                 | 0.0%                          |
| 38             | W, W  | 25                  | 0.0%                          |
| 39             | BN, D   | 76                  | 0.0%                          |
| 40             | D, C  | -19                 | 0.0%                          |
| 41             | C, C  | -69                 | 0.0%                          |
| 42             | C, C  | 37                  | 0.0%                          |
| <b>Average</b> |   | <b>-15</b>          | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>129</b>          | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-152</b>         | <b>-0.1%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-165. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 18 (SR18) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -83                 | 0.0%                          |
| 2    | W, W  | -436                | 0.0%                          |
| 3    | C, C  | -294                | 0.0%                          |
| 4    | C, C  | -74                 | 0.0%                          |
| 5    | AN, W   | -12                 | 0.0%                          |
| 6    | BN, AN  | 113                 | 0.0%                          |
| 7    | AN, W   | -100                | 0.0%                          |
| 8    | D, D  | -371                | 0.0%                          |
| 9    | W, W  | 34                  | 0.0%                          |
| 10   | W, W  | -15                 | 0.0%                          |
| 11   | W, AN   | -276                | 0.0%                          |
| 12   | D, D  | 147                 | 0.0%                          |
| 13   | W, W  | -100                | 0.0%                          |
| 14   | D, D  | -508                | 0.0%                          |
| 15   | C, C  | -396                | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -226                | 0.0%                          |
| 17             | C, C  | -702                | 0.0%                          |
| 18             | C, C  | -137                | 0.0%                          |
| 19             | C, C  | -182                | 0.0%                          |
| 20             | AN, W   | -279                | 0.0%                          |
| 21             | C, C  | -426                | 0.0%                          |
| 22             | W, W  | -82                 | 0.0%                          |
| 23             | W, W  | 163                 | 0.0%                          |
| 24             | W, W  | -364                | 0.0%                          |
| 25             | W, W  | -46                 | 0.0%                          |
| 26             | W, AN   | -272                | 0.0%                          |
| 27             | AN, AN  | -274                | 0.0%                          |
| 28             | D, D  | -154                | 0.0%                          |
| 29             | D, D  | -223                | 0.0%                          |
| 30             | AN, BN  | -458                | 0.0%                          |
| 31             | BN, D   | -502                | 0.0%                          |
| 32             | AN, W   | -167                | 0.0%                          |
| 33             | W, W  | -118                | 0.0%                          |
| 34             | D, C  | -75                 | 0.0%                          |
| 35             | C, C  | -427                | 0.0%                          |
| 36             | D, BN   | 58                  | 0.0%                          |
| 37             | BN, AN  | -201                | 0.0%                          |
| 38             | W, W  | -118                | 0.0%                          |
| 39             | BN, D   | -567                | 0.0%                          |
| 40             | D, C  | -343                | 0.0%                          |
| 41             | C, C  | 100                 | 0.0%                          |
| 42             | C, C  | -25                 | 0.0%                          |
| <b>Average</b> |   | <b>-200</b>         | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>163</b>          | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-702</b>         | <b>0.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-166. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 19 (SR19) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -42                 | 0.0%                          |
| 2    | W, W  | 1                   | 0.0%                          |
| 3    | C, C  | 0                   | 0.0%                          |
| 4    | C, C  | 0                   | 0.0%                          |
| 5    | AN, W   | 0                   | 0.0%                          |
| 6    | BN, AN  | -2                  | 0.0%                          |
| 7    | AN, W   | 22                  | 0.0%                          |
| 8    | D, D  | 0                   | 0.0%                          |
| 9    | W, W  | 0                   | 0.0%                          |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | 74                  | 0.0%                          |
| 12   | D, D  | 20                  | 0.0%                          |
| 13   | W, W  | -17                 | 0.0%                          |
| 14   | D, D  | 43                  | 0.0%                          |
| 15   | C, C  | 80                  | 0.0%                          |
| 16   | D, C  | -60                 | 0.0%                          |
| 17   | C, C  | -48                 | 0.0%                          |
| 18   | C, C  | -23                 | 0.0%                          |
| 19   | C, C  | 32                  | 0.0%                          |
| 20   | AN, W   | 0                   | 0.0%                          |
| 21   | C, C  | 0                   | 0.0%                          |
| 22   | W, W  | -31                 | 0.0%                          |
| 23   | W, W  | -23                 | 0.0%                          |
| 24   | W, W  | 144                 | 0.1%                          |
| 25   | W, W  | 23                  | 0.0%                          |
| 26   | W, AN   | -39                 | 0.0%                          |
| 27   | AN, AN  | 0                   | 0.0%                          |
| 28   | D, D  | 26                  | 0.0%                          |
| 29   | D, D  | -3                  | 0.0%                          |
| 30   | AN, BN  | -20                 | 0.0%                          |
| 31   | BN, D   | 0                   | 0.0%                          |
| 32   | AN, W   | 0                   | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 0                   | 0.0%                          |
| 34             | D, C  | 0                   | 0.0%                          |
| 35             | C, C  | 0                   | 0.0%                          |
| 36             | D, BN   | 0                   | 0.0%                          |
| 37             | BN, AN  | 0                   | 0.0%                          |
| 38             | W, W  | 0                   | 0.0%                          |
| 39             | BN, D   | 0                   | 0.0%                          |
| 40             | D, C  | 0                   | 0.0%                          |
| 41             | C, C  | 0                   | 0.0%                          |
| 42             | C, C  | -42                 | 0.0%                          |
| <b>Average</b> |   | <b>4</b>            | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>144</b>          | <b>0.1%</b>                   |
| <b>Minimum</b> |   | <b>-60</b>          | <b>0.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-167. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 20 (SR20) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 0                   | 0.0%                          |
| 2    | W, W  | 0                   | 0.0%                          |
| 3    | C, C  | -2                  | 0.0%                          |
| 4    | C, C  | 0                   | 0.0%                          |
| 5    | AN, W   | -4                  | 0.0%                          |
| 6    | BN, AN  | -18                 | 0.0%                          |
| 7    | AN, W   | 1                   | 0.0%                          |
| 8    | D, D  | 0                   | 0.0%                          |
| 9    | W, W  | -1                  | 0.0%                          |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | -47                 | 0.0%                          |
| 12   | D, D  | 0                   | 0.0%                          |
| 13   | W, W  | 0                   | 0.0%                          |
| 14   | D, D  | -145                | 0.0%                          |
| 15   | C, C  | 1                   | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 34                  | 0.0%                          |
| 17             | C, C  | -1                  | 0.0%                          |
| 18             | C, C  | 0                   | 0.0%                          |
| 19             | C, C  | 113                 | 0.0%                          |
| 20             | AN, W   | -34                 | 0.0%                          |
| 21             | C, C  | -19                 | 0.0%                          |
| 22             | W, W  | -4                  | 0.0%                          |
| 23             | W, W  | 1                   | 0.0%                          |
| 24             | W, W  | 20                  | 0.0%                          |
| 25             | W, W  | -22                 | 0.0%                          |
| 26             | W, AN   | 0                   | 0.0%                          |
| 27             | AN, AN  | 0                   | 0.0%                          |
| 28             | D, D  | 0                   | 0.0%                          |
| 29             | D, D  | 0                   | 0.0%                          |
| 30             | AN, BN  | -1                  | 0.0%                          |
| 31             | BN, D   | 140                 | 0.0%                          |
| 32             | AN, W   | 100                 | 0.0%                          |
| 33             | W, W  | -139                | 0.0%                          |
| 34             | D, C  | 1                   | 0.0%                          |
| 35             | C, C  | 21                  | 0.0%                          |
| 36             | D, BN   | 4                   | 0.0%                          |
| 37             | BN, AN  | 17                  | 0.0%                          |
| 38             | W, W  | 3                   | 0.0%                          |
| 39             | BN, D   | 2                   | 0.0%                          |
| 40             | D, C  | -2                  | 0.0%                          |
| 41             | C, C  | 18                  | 0.0%                          |
| 42             | C, C  | -2                  | 0.0%                          |
| <b>Average</b> |   | <b>1</b>            | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>140</b>          | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-145</b>         | <b>0.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-168. Simulated Change in Groundwater Pumping in C2VSimFG Subregion 21 (SR21) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 28                  | 0.0%                          |
| 2    | W, W  | -19                 | 0.0%                          |
| 3    | C, C  | -42                 | 0.0%                          |
| 4    | C, C  | -43                 | 0.0%                          |
| 5    | AN, W   | 214                 | 0.0%                          |
| 6    | BN, AN  | -1                  | 0.0%                          |
| 7    | AN, W   | -77                 | 0.0%                          |
| 8    | D, D  | 31                  | 0.0%                          |
| 9    | W, W  | 30                  | 0.0%                          |
| 10   | W, W  | -57                 | 0.0%                          |
| 11   | W, AN   | 28                  | 0.0%                          |
| 12   | D, D  | -10                 | 0.0%                          |
| 13   | W, W  | -36                 | 0.0%                          |
| 14   | D, D  | 43                  | 0.0%                          |
| 15   | C, C  | 219                 | 0.0%                          |
| 16   | D, C  | -117                | 0.0%                          |
| 17   | C, C  | -128                | 0.0%                          |
| 18   | C, C  | 26                  | 0.0%                          |
| 19   | C, C  | 189                 | 0.0%                          |
| 20   | AN, W   | 24                  | 0.0%                          |
| 21   | C, C  | 109                 | 0.0%                          |
| 22   | W, W  | 0                   | 0.0%                          |
| 23   | W, W  | 44                  | 0.0%                          |
| 24   | W, W  | 26                  | 0.0%                          |
| 25   | W, W  | 0                   | 0.0%                          |
| 26   | W, AN   | 0                   | 0.0%                          |
| 27   | AN, AN  | 108                 | 0.0%                          |
| 28   | D, D  | -14                 | 0.0%                          |
| 29   | D, D  | -19                 | 0.0%                          |
| 30   | AN, BN  | 14                  | 0.0%                          |
| 31   | BN, D   | -6                  | 0.0%                          |
| 32   | AN, W   | -227                | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -6                  | 0.0%                          |
| 34             | D, C  | -50                 | 0.0%                          |
| 35             | C, C  | 44                  | 0.0%                          |
| 36             | D, BN   | 31                  | 0.0%                          |
| 37             | BN, AN  | -2                  | 0.0%                          |
| 38             | W, W  | 37                  | 0.0%                          |
| 39             | BN, D   | -163                | 0.0%                          |
| 40             | D, C  | 26                  | 0.0%                          |
| 41             | C, C  | 8                   | 0.0%                          |
| 42             | C, C  | 3                   | 0.0%                          |
| <b>Average</b> |   | <b>6</b>            | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>219</b>          | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-227</b>         | <b>0.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

## I-1.2 Groundwater-Surface Water Interaction Flow

### I-1.2.1 Groundwater-Surface Water Interaction Flow

Table I.1-169 through Table I.1-189 provide the annual simulated groundwater-surface water interaction flow through the model simulation period for each of the 21 model subregions.



Table I.1-169. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 1 (SR1)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | -300,890 | -299,137  | -299,364    | -299,358         | -300,170    | -299,841    | -303,400  | -301,560  |
| 2    | W, W  | -303,988 | -302,811  | -304,279    | -304,366         | -304,263    | -304,609    | -301,974  | -302,437  |
| 3    | C, C  | -292,355 | -291,305  | -293,034    | -293,096         | -293,105    | -293,066    | -289,176  | -293,178  |
| 4    | C, C  | -260,270 | -263,040  | -245,407    | -249,408         | -244,916    | -244,752    | -227,799  | -254,269  |
| 5    | AN, W   | -227,280 | -225,450  | -219,548    | -215,729         | -219,799    | -220,057    | -199,140  | -223,235  |
| 6    | BN, AN  | -258,835 | -254,085  | -254,152    | -254,684         | -255,710    | -254,653    | -248,613  | -253,720  |
| 7    | AN, W   | -249,387 | -252,142  | -249,956    | -250,039         | -248,735    | -249,539    | -250,823  | -251,482  |
| 8    | D, D  | -259,497 | -259,657  | -258,724    | -258,796         | -258,758    | -259,086    | -255,451  | -259,222  |
| 9    | W, W  | -265,014 | -263,503  | -263,768    | -263,792         | -264,199    | -263,488    | -266,973  | -264,788  |
| 10   | W, W  | -297,385 | -298,429  | -298,628    | -298,572         | -298,495    | -298,413    | -295,028  | -298,632  |
| 11   | W, AN   | -337,517 | -340,830  | -339,444    | -339,489         | -339,315    | -338,687    | -339,112  | -338,868  |
| 12   | D, D  | -316,090 | -315,858  | -314,686    | -314,667         | -314,888    | -315,468    | -315,549  | -315,734  |
| 13   | W, W  | -303,254 | -301,690  | -302,623    | -302,691         | -302,669    | -302,956    | -303,576  | -302,467  |
| 14   | D, D  | -278,993 | -280,025  | -277,932    | -277,914         | -278,159    | -278,038    | -270,454  | -280,604  |
| 15   | C, C  | -268,193 | -266,063  | -269,955    | -269,896         | -268,813    | -266,469    | -265,856  | -269,474  |
| 16   | D, C  | -246,241 | -248,544  | -242,327    | -242,347         | -243,136    | -244,982    | -241,506  | -243,954  |
| 17   | C, C  | -233,252 | -232,520  | -233,547    | -233,512         | -232,354    | -232,464    | -230,666  | -232,620  |
| 18   | C, C  | -202,567 | -203,504  | -191,404    | -190,982         | -192,087    | -191,377    | -194,279  | -197,503  |
| 19   | C, C  | -192,610 | -191,419  | -174,752    | -175,046         | -174,203    | -170,770    | -176,327  | -183,605  |
| 20   | AN, W   | -195,394 | -197,333  | -191,431    | -193,337         | -192,378    | -195,020    | -195,953  | -195,533  |
| 21   | C, C  | -231,115 | -232,002  | -230,736    | -229,836         | -230,330    | -230,404    | -225,130  | -230,900  |
| 22   | W, W  | -218,919 | -218,516  | -216,884    | -216,776         | -217,532    | -217,570    | -216,804  | -218,098  |
| 23   | W, W  | -258,255 | -260,645  | -257,837    | -257,689         | -258,407    | -258,005    | -256,516  | -259,731  |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)        | Alt1 (AF)       | Alt2v1 (AF)     | Alt2v1wTUCP (AF) | Alt2v2 (AF)     | Alt2v3 (AF)     | Alt3 (AF)       | Alt4 (AF)       |
|----------------|---|-----------------|-----------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|
| 24             | W, W  | -278,694        | -277,500        | -275,814        | -275,753         | -276,226        | -276,290        | -277,598        | -277,963        |
| 25             | W, W  | -263,345        | -264,500        | -262,868        | -262,810         | -263,104        | -262,766        | -261,232        | -262,802        |
| 26             | W, AN   | -313,773        | -315,757        | -315,148        | -315,115         | -315,286        | -315,073        | -312,972        | -316,081        |
| 27             | AN, AN  | -301,720        | -302,295        | -299,737        | -299,632         | -300,473        | -299,974        | -300,062        | -299,146        |
| 28             | D, D  | -293,535        | -291,310        | -291,314        | -291,298         | -291,388        | -291,889        | -288,325        | -293,414        |
| 29             | D, D  | -280,398        | -282,333        | -280,045        | -280,054         | -279,951        | -279,325        | -283,630        | -279,571        |
| 30             | AN, BN  | -271,478        | -271,760        | -271,474        | -271,413         | -272,264        | -272,343        | -272,661        | -273,491        |
| 31             | BN, D   | -287,462        | -288,989        | -287,421        | -287,402         | -287,962        | -287,411        | -283,168        | -288,905        |
| 32             | AN, W   | -280,223        | -276,972        | -279,596        | -279,467         | -278,910        | -279,608        | -274,644        | -278,507        |
| 33             | W, W  | -290,434        | -288,812        | -288,571        | -288,691         | -289,476        | -288,244        | -292,257        | -288,660        |
| 34             | D, C  | -308,508        | -312,743        | -310,158        | -310,182         | -311,067        | -311,478        | -303,548        | -311,016        |
| 35             | C, C  | -289,254        | -286,142        | -288,893        | -288,877         | -288,522        | -287,561        | -278,894        | -288,768        |
| 36             | D, BN   | -266,820        | -268,013        | -265,480        | -265,487         | -265,587        | -266,558        | -258,203        | -265,685        |
| 37             | BN, AN  | -242,273        | -242,925        | -241,420        | -241,483         | -241,074        | -241,641        | -241,603        | -242,158        |
| 38             | W, W  | -253,833        | -253,809        | -252,663        | -252,707         | -252,674        | -252,894        | -252,931        | -253,862        |
| 39             | BN, D   | -267,581        | -269,686        | -267,682        | -267,729         | -267,445        | -267,820        | -264,447        | -268,057        |
| 40             | D, C  | -265,787        | -261,874        | -264,111        | -264,155         | -264,069        | -264,539        | -262,549        | -265,500        |
| 41             | C, C  | -237,982        | -240,922        | -225,393        | -227,488         | -225,513        | -225,650        | -204,856        | -232,521        |
| 42             | C, C  | -212,411        | -219,013        | -206,942        | -199,365         | -207,643        | -207,678        | -161,234        | -198,463        |
| <b>Average</b> |   | <b>-266,734</b> | <b>-266,997</b> | <b>-264,408</b> | <b>-264,313</b>  | <b>-264,549</b> | <b>-264,487</b> | <b>-260,593</b> | <b>-265,623</b> |
| <b>Maximum</b> |   | <b>-192,610</b> | <b>-191,419</b> | <b>-174,752</b> | <b>-175,046</b>  | <b>-174,203</b> | <b>-170,770</b> | <b>-161,234</b> | <b>-183,605</b> |
| <b>Minimum</b> |   | <b>-337,517</b> | <b>-340,830</b> | <b>-339,444</b> | <b>-339,489</b>  | <b>-339,315</b> | <b>-338,687</b> | <b>-339,112</b> | <b>-338,868</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-170. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 2 (SR2)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 94,665   | 96,244    | 97,705      | 97,591           | 96,548      | 98,400      | 94,477    | 93,156    |
| 2    | W, W  | 46,348   | 48,144    | 46,147      | 46,076           | 46,421      | 46,448      | 50,822    | 48,263    |
| 3    | C, C  | 13,023   | 15,918    | 13,058      | 12,986           | 13,000      | 13,854      | 20,056    | 11,565    |
| 4    | C, C  | -12,235  | -14,290   | -5,418      | -13,806          | -4,780      | -4,221      | -12,326   | -12,189   |
| 5    | AN, W   | 372,280  | 378,913   | 370,241     | 377,941          | 370,282     | 370,328     | 381,636   | 373,728   |
| 6    | BN, AN  | 136,485  | 143,914   | 145,178     | 144,689          | 142,860     | 145,334     | 152,010   | 144,960   |
| 7    | AN, W   | 180,233  | 171,333   | 181,599     | 181,095          | 183,042     | 183,102     | 177,265   | 171,753   |
| 8    | D, D  | 122,521  | 118,175   | 125,421     | 125,104          | 125,449     | 126,143     | 129,892   | 120,013   |
| 9    | W, W  | 143,457  | 145,028   | 145,969     | 145,830          | 146,976     | 149,236     | 144,080   | 143,120   |
| 10   | W, W  | 15,747   | 13,697    | 14,738      | 14,738           | 15,436      | 15,687      | 19,274    | 13,839    |
| 11   | W, AN   | -31,013  | -36,985   | -34,035     | -34,055          | -33,672     | -32,828     | -34,208   | -33,365   |
| 12   | D, D  | 30,421   | 30,113    | 33,485      | 33,464           | 33,267      | 32,705      | 33,097    | 30,433    |
| 13   | W, W  | 65,422   | 68,869    | 68,820      | 68,741           | 69,036      | 68,933      | 68,553    | 66,480    |
| 14   | D, D  | 67,458   | 65,055    | 70,711      | 70,652           | 70,507      | 70,967      | 75,418    | 62,384    |
| 15   | C, C  | 139,933  | 140,238   | 141,349     | 141,261          | 143,235     | 146,972     | 148,130   | 137,005   |
| 16   | D, C  | 198,781  | 190,540   | 211,773     | 211,687          | 207,580     | 208,520     | 215,326   | 205,553   |
| 17   | C, C  | 113,681  | 110,016   | 118,083     | 117,300          | 115,837     | 120,371     | 123,672   | 114,386   |
| 18   | C, C  | 168,263  | 162,931   | 171,470     | 171,912          | 166,807     | 171,806     | 174,641   | 166,660   |
| 19   | C, C  | 253,023  | 254,123   | 267,180     | 266,233          | 264,994     | 275,191     | 270,450   | 259,489   |
| 20   | AN, W   | 344,872  | 337,090   | 351,158     | 348,990          | 347,017     | 345,314     | 346,279   | 343,734   |
| 21   | C, C  | 89,016   | 85,441    | 91,589      | 93,194           | 91,023      | 92,760      | 98,716    | 87,459    |
| 22   | W, W  | 274,174  | 272,332   | 287,053     | 287,244          | 282,414     | 286,631     | 289,207   | 273,806   |
| 23   | W, W  | 152,808  | 147,532   | 158,994     | 158,798          | 156,165     | 159,154     | 161,954   | 149,005   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 80,144         | 83,073         | 87,461         | 87,338           | 85,803         | 87,462         | 87,449         | 81,279         |
| 25             | W, W  | 82,144         | 79,421         | 84,106         | 84,070           | 83,109         | 84,551         | 87,779         | 83,128         |
| 26             | W, AN   | 3,212          | -1,161         | 676            | 645              | 360            | 1,146          | 5,826          | -1,333         |
| 27             | AN, AN  | 47,015         | 45,441         | 51,274         | 51,244           | 49,670         | 50,913         | 49,379         | 50,840         |
| 28             | D, D  | 34,006         | 36,716         | 38,981         | 38,943           | 38,340         | 38,518         | 43,896         | 32,808         |
| 29             | D, D  | 113,701        | 108,329        | 116,384        | 116,333          | 116,199        | 118,719        | 113,274        | 113,156        |
| 30             | AN, BN  | 154,618        | 152,403        | 155,460        | 155,411          | 154,110        | 154,965        | 154,900        | 149,742        |
| 31             | BN, D   | 76,556         | 72,763         | 76,847         | 76,893           | 75,967         | 78,171         | 81,800         | 72,874         |
| 32             | AN, W   | 76,791         | 80,705         | 78,056         | 78,192           | 78,989         | 79,161         | 86,148         | 78,481         |
| 33             | W, W  | 37,024         | 38,355         | 40,102         | 39,921           | 38,519         | 41,322         | 36,753         | 39,154         |
| 34             | D, C  | 23,015         | 15,520         | 20,806         | 20,784           | 19,103         | 19,309         | 25,332         | 18,409         |
| 35             | C, C  | 88,062         | 93,514         | 89,639         | 89,599           | 90,249         | 92,801         | 101,101        | 89,016         |
| 36             | D, BN   | 128,597        | 125,073        | 134,292        | 134,220          | 134,209        | 133,307        | 141,154        | 131,607        |
| 37             | BN, AN  | 188,850        | 183,642        | 192,245        | 192,053          | 193,274        | 191,393        | 190,278        | 187,785        |
| 38             | W, W  | 161,726        | 161,412        | 166,233        | 166,128          | 166,760        | 166,994        | 168,293        | 161,984        |
| 39             | BN, D   | 62,492         | 58,889         | 63,023         | 62,949           | 63,252         | 63,503         | 68,862         | 61,553         |
| 40             | D, C  | 128,025        | 133,669        | 130,984        | 130,968          | 130,893        | 131,095        | 130,370        | 128,371        |
| 41             | C, C  | 111,455        | 105,443        | 112,571        | 108,324          | 112,160        | 112,682        | 118,390        | 108,794        |
| 42             | C, C  | 217,036        | 213,532        | 223,835        | 227,736          | 223,626        | 224,512        | 234,704        | 221,202        |
| <b>Average</b> |   | <b>114,139</b> | <b>112,646</b> | <b>117,506</b> | <b>117,367</b>   | <b>116,763</b> | <b>118,127</b> | <b>120,336</b> | <b>113,812</b> |
| <b>Maximum</b> |   | <b>372,280</b> | <b>378,913</b> | <b>370,241</b> | <b>377,941</b>   | <b>370,282</b> | <b>370,328</b> | <b>381,636</b> | <b>373,728</b> |
| <b>Minimum</b> |   | <b>-31,013</b> | <b>-36,985</b> | <b>-34,035</b> | <b>-34,055</b>   | <b>-33,672</b> | <b>-32,828</b> | <b>-34,208</b> | <b>-33,365</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-171. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 3 (SR3)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | -97,426  | -97,301   | -96,436     | -96,653          | -97,587     | -91,130     | -90,994   | -97,780   |
| 2    | W, W  | -94,262  | -94,068   | -93,286     | -93,490          | -94,367     | -89,970     | -87,739   | -94,704   |
| 3    | C, C  | -85,985  | -86,143   | -84,452     | -84,644          | -85,483     | -80,075     | -76,436   | -86,233   |
| 4    | C, C  | -65,703  | -65,735   | -52,448     | -52,409          | -52,979     | -50,053     | -7,817    | -60,008   |
| 5    | AN, W   | -48,869  | -47,887   | -34,891     | -34,506          | -35,815     | -32,121     | -148      | -41,864   |
| 6    | BN, AN  | -70,152  | -69,658   | -64,509     | -64,847          | -65,378     | -58,311     | -51,554   | -67,982   |
| 7    | AN, W   | -73,108  | -75,429   | -68,906     | -69,419          | -70,130     | -63,074     | -61,959   | -74,693   |
| 8    | D, D  | -77,083  | -78,245   | -73,716     | -74,067          | -74,996     | -66,813     | -66,783   | -77,648   |
| 9    | W, W  | -86,663  | -87,898   | -84,041     | -84,319          | -84,729     | -77,481     | -77,792   | -87,596   |
| 10   | W, W  | -103,621 | -104,484  | -101,157    | -101,408         | -102,152    | -98,548     | -95,493   | -104,094  |
| 11   | W, AN   | -112,200 | -113,002  | -110,000    | -110,230         | -111,087    | -108,292    | -104,640  | -112,648  |
| 12   | D, D  | -95,612  | -96,168   | -93,250     | -93,457          | -94,409     | -90,451     | -88,139   | -96,054   |
| 13   | W, W  | -86,711  | -86,946   | -83,871     | -84,060          | -84,870     | -79,096     | -79,627   | -87,506   |
| 14   | D, D  | -84,807  | -85,628   | -81,884     | -82,054          | -82,879     | -78,585     | -73,527   | -85,802   |
| 15   | C, C  | -78,432  | -80,237   | -74,092     | -74,248          | -75,028     | -69,375     | -64,064   | -78,688   |
| 16   | D, C  | -69,849  | -73,166   | -63,987     | -64,138          | -66,067     | -60,985     | -55,491   | -67,830   |
| 17   | C, C  | -68,158  | -72,463   | -63,648     | -63,765          | -66,547     | -58,425     | -55,197   | -68,158   |
| 18   | C, C  | -49,737  | -53,705   | -34,002     | -33,865          | -37,885     | -31,717     | -30,884   | -44,170   |
| 19   | C, C  | -39,707  | -42,232   | -22,208     | -22,319          | -25,542     | -21,300     | -18,967   | -31,884   |
| 20   | AN, W   | -44,699  | -46,700   | -37,794     | -38,008          | -40,992     | -36,443     | -32,945   | -42,921   |
| 21   | C, C  | -66,112  | -67,367   | -59,344     | -59,775          | -62,584     | -54,977     | -51,139   | -65,102   |
| 22   | W, W  | -57,768  | -59,332   | -48,346     | -48,813          | -52,142     | -45,929     | -41,992   | -57,478   |
| 23   | W, W  | -77,244  | -78,645   | -70,506     | -70,840          | -73,264     | -69,539     | -65,477   | -76,902   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)        | Alt1 (AF)       | Alt2v1 (AF)     | Alt2v1wTUCP (AF) | Alt2v2 (AF)     | Alt2v3 (AF)     | Alt3 (AF)       | Alt4 (AF)       |
|----------------|---|-----------------|-----------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|
| 24             | W, W  | -86,972         | -87,785         | -81,292         | -81,584          | -83,746         | -80,656         | -76,434         | -86,283         |
| 25             | W, W  | -88,247         | -88,794         | -83,336         | -83,590          | -85,660         | -82,935         | -78,506         | -87,423         |
| 26             | W, AN   | -103,798        | -104,684        | -99,343         | -99,573          | -101,584        | -99,086         | -95,458         | -103,404        |
| 27             | AN, AN  | -91,236         | -92,064         | -86,927         | -87,139          | -89,073         | -85,415         | -83,850         | -90,897         |
| 28             | D, D  | -88,797         | -89,824         | -84,721         | -84,911          | -86,817         | -79,914         | -78,164         | -88,932         |
| 29             | D, D  | -84,992         | -87,169         | -80,770         | -80,942          | -83,296         | -75,264         | -75,562         | -85,916         |
| 30             | AN, BN  | -86,877         | -88,271         | -83,485         | -83,638          | -85,942         | -78,108         | -78,750         | -87,654         |
| 31             | BN, D   | -92,034         | -93,086         | -89,154         | -89,273          | -91,379         | -83,021         | -81,876         | -92,571         |
| 32             | AN, W   | -92,589         | -94,023         | -90,122         | -90,256          | -92,300         | -83,293         | -84,290         | -93,464         |
| 33             | W, W  | -100,524        | -102,198        | -98,314         | -98,453          | -100,291        | -92,869         | -94,034         | -101,474        |
| 34             | D, C  | -98,389         | -99,827         | -96,339         | -96,447          | -98,377         | -92,729         | -88,376         | -99,159         |
| 35             | C, C  | -87,329         | -88,019         | -84,427         | -84,534          | -86,377         | -77,957         | -74,606         | -87,086         |
| 36             | D, BN   | -76,665         | -78,333         | -72,018         | -72,150          | -74,138         | -66,474         | -62,778         | -75,467         |
| 37             | BN, AN  | -73,504         | -75,642         | -70,127         | -70,290          | -71,681         | -65,205         | -63,965         | -74,316         |
| 38             | W, W  | -89,097         | -90,841         | -86,181         | -86,307          | -87,582         | -81,569         | -81,092         | -89,511         |
| 39             | BN, D   | -89,425         | -90,842         | -86,837         | -86,948          | -88,254         | -83,653         | -81,749         | -89,659         |
| 40             | D, C  | -84,205         | -85,575         | -81,245         | -81,350          | -82,946         | -76,127         | -73,622         | -84,057         |
| 41             | C, C  | -70,450         | -72,522         | -52,998         | -53,015          | -54,126         | -47,354         | -12,778         | -63,225         |
| 42             | C, C  | -48,462         | -50,486         | -31,429         | -31,425          | -33,743         | -30,196         | 28,610          | -34,678         |
| <b>Average</b> |   | <b>-80,179</b>  | <b>-81,486</b>  | <b>-74,663</b>  | <b>-74,837</b>   | <b>-76,529</b>  | <b>-70,822</b>  | <b>-64,669</b>  | <b>-79,117</b>  |
| <b>Maximum</b> |   | <b>-39,707</b>  | <b>-42,232</b>  | <b>-22,208</b>  | <b>-22,319</b>   | <b>-25,542</b>  | <b>-21,300</b>  | <b>28,610</b>   | <b>-31,884</b>  |
| <b>Minimum</b> |   | <b>-112,200</b> | <b>-113,002</b> | <b>-110,000</b> | <b>-110,230</b>  | <b>-111,087</b> | <b>-108,292</b> | <b>-104,640</b> | <b>-112,648</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-172. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 4 (SR4)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (TAF) | Alt1 (TAF) | Alt2v1 (TAF) | Alt2v1wTUCP (TAF) | Alt2v2 (TAF) | Alt2v3 (TAF) | Alt3 (TAF) | Alt4 (TAF) |
|------|---|-----------|------------|--------------|-------------------|--------------|--------------|------------|------------|
| 1    | W, W  | -424,892  | -423,659   | -418,174     | -418,560          | -426,691     | -406,040     | -425,009   | -429,447   |
| 2    | W, W  | -408,685  | -408,290   | -408,165     | -408,510          | -413,730     | -399,105     | -400,727   | -405,922   |
| 3    | C, C  | -362,075  | -357,697   | -362,022     | -362,368          | -368,788     | -351,826     | -335,841   | -364,409   |
| 4    | C, C  | -290,252  | -295,632   | -240,315     | -257,826          | -241,813     | -234,192     | -116,817   | -274,270   |
| 5    | AN, W   | -309,678  | -309,118   | -285,922     | -272,635          | -287,789     | -275,246     | -157,176   | -299,000   |
| 6    | BN, AN  | -385,578  | -369,997   | -362,756     | -364,311          | -372,337     | -344,462     | -335,560   | -367,501   |
| 7    | AN, W   | -410,156  | -422,088   | -407,715     | -408,320          | -408,955     | -386,852     | -408,246   | -420,494   |
| 8    | D, D  | -343,396  | -352,915   | -339,452     | -340,146          | -343,159     | -316,751     | -321,955   | -349,561   |
| 9    | W, W  | -444,374  | -437,688   | -434,070     | -434,552          | -440,719     | -418,379     | -426,868   | -439,095   |
| 10   | W, W  | -458,264  | -458,358   | -453,102     | -453,520          | -459,008     | -451,858     | -438,972   | -457,768   |
| 11   | W, AN   | -456,863  | -468,671   | -459,568     | -459,978          | -465,939     | -459,178     | -453,933   | -460,842   |
| 12   | D, D  | -391,074  | -391,643   | -382,564     | -382,868          | -390,126     | -378,976     | -376,978   | -390,244   |
| 13   | W, W  | -442,508  | -434,724   | -436,197     | -436,571          | -442,283     | -426,216     | -428,612   | -438,728   |
| 14   | D, D  | -345,716  | -353,291   | -338,875     | -339,179          | -345,686     | -332,985     | -317,622   | -356,651   |
| 15   | C, C  | -372,084  | -373,215   | -371,456     | -371,741          | -378,207     | -351,934     | -353,953   | -375,563   |
| 16   | D, C  | -331,617  | -342,513   | -314,807     | -315,062          | -326,108     | -312,361     | -299,177   | -326,405   |
| 17   | C, C  | -376,363  | -379,489   | -373,096     | -375,280          | -377,234     | -355,610     | -343,082   | -377,650   |
| 18   | C, C  | -317,194  | -324,121   | -281,311     | -280,340          | -286,931     | -272,864     | -260,866   | -303,633   |
| 19   | C, C  | -287,899  | -279,453   | -227,836     | -230,281          | -230,341     | -209,637     | -208,801   | -260,884   |
| 20   | AN, W   | -354,937  | -366,534   | -337,443     | -341,738          | -350,192     | -343,882     | -330,735   | -354,048   |
| 21   | C, C  | -336,792  | -343,478   | -325,936     | -324,366          | -333,603     | -312,946     | -297,620   | -337,881   |
| 22   | W, W  | -383,352  | -384,413   | -366,551     | -366,007          | -377,465     | -363,765     | -356,625   | -379,881   |
| 23   | W, W  | -367,618  | -377,425   | -358,469     | -359,094          | -368,278     | -360,442     | -353,201   | -373,153   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (TAF)       | Alt1 (TAF)      | Alt2v1 (TAF)    | Alt2v1wTUCP (TAF) | Alt2v2 (TAF)    | Alt2v3 (TAF)    | Alt3 (TAF)      | Alt4 (TAF)      |
|----------------|---|-----------------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|-----------------|
| 24             | W, W  | -391,161        | -386,799        | -376,144        | -376,728          | -384,825        | -379,424        | -374,087        | -388,898        |
| 25             | W, W  | -398,216        | -406,549        | -390,480        | -390,904          | -398,700        | -392,924        | -380,515        | -396,860        |
| 26             | W, AN   | -429,141        | -440,096        | -429,994        | -430,380          | -437,885        | -433,061        | -419,652        | -438,246        |
| 27             | AN, AN  | -394,320        | -396,718        | -379,851        | -380,210          | -390,355        | -376,525        | -386,122        | -384,076        |
| 28             | D, D  | -397,532        | -393,713        | -383,370        | -383,692          | -392,423        | -368,917        | -363,403        | -399,472        |
| 29             | D, D  | -394,602        | -400,616        | -389,807        | -390,103          | -395,916        | -363,966        | -391,363        | -392,291        |
| 30             | AN, BN  | -392,008        | -395,169        | -387,941        | -388,200          | -397,470        | -368,738        | -389,465        | -398,529        |
| 31             | BN, D   | -385,102        | -394,930        | -383,169        | -383,244          | -391,793        | -358,945        | -370,203        | -394,259        |
| 32             | AN, W   | -436,568        | -428,535        | -429,821        | -429,728          | -435,659        | -406,170        | -414,554        | -432,111        |
| 33             | W, W  | -429,112        | -429,027        | -420,320        | -421,428          | -431,128        | -406,128        | -417,402        | -425,196        |
| 34             | D, C  | -375,368        | -389,767        | -376,622        | -376,826          | -388,338        | -371,403        | -355,042        | -383,988        |
| 35             | C, C  | -394,692        | -387,295        | -390,005        | -390,214          | -397,424        | -364,018        | -356,148        | -394,243        |
| 36             | D, BN   | -365,936        | -371,111        | -357,900        | -358,122          | -365,661        | -338,510        | -330,559        | -363,492        |
| 37             | BN, AN  | -376,157        | -382,205        | -369,405        | -369,702          | -376,748        | -349,693        | -365,689        | -375,127        |
| 38             | W, W  | -406,600        | -404,916        | -399,143        | -399,338          | -405,957        | -385,290        | -386,089        | -406,816        |
| 39             | BN, D   | -369,950        | -378,260        | -368,872        | -369,063          | -375,368        | -358,378        | -358,726        | -372,653        |
| 40             | D, C  | -375,561        | -367,994        | -367,817        | -367,940          | -375,189        | -351,507        | -357,665        | -374,582        |
| 41             | C, C  | -342,596        | -351,314        | -301,374        | -311,485          | -306,034        | -286,651        | -163,611        | -333,332        |
| 42             | C, C  | -303,093        | -310,571        | -256,574        | -246,590          | -262,583        | -253,311        | -35,646         | -258,619        |
| <b>Average</b> |   | <b>-379,978</b> | <b>-382,619</b> | <b>-367,724</b> | <b>-368,266</b>   | <b>-374,877</b> | <b>-356,644</b> | <b>-342,008</b> | <b>-377,520</b> |
| <b>Maximum</b> |   | <b>-287,899</b> | <b>-279,453</b> | <b>-227,836</b> | <b>-230,281</b>   | <b>-230,341</b> | <b>-209,637</b> | <b>-35,646</b>  | <b>-258,619</b> |
| <b>Minimum</b> |   | <b>-458,264</b> | <b>-468,671</b> | <b>-459,568</b> | <b>-459,978</b>   | <b>-465,939</b> | <b>-459,178</b> | <b>-453,933</b> | <b>-460,842</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-173. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 5 (SR5)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | -422,319 | -427,427  | -423,406    | -423,427         | -424,063    | -419,117    | -420,826  | -423,474  |
| 2    | W, W  | -412,983 | -411,867  | -413,820    | -413,719         | -416,081    | -409,466    | -417,360  | -416,141  |
| 3    | C, C  | -394,653 | -392,833  | -393,800    | -393,797         | -390,242    | -385,887    | -363,431  | -391,503  |
| 4    | C, C  | -240,794 | -247,754  | -248,893    | -241,370         | -240,751    | -238,996    | -211,411  | -242,548  |
| 5    | AN, W   | -159,889 | -152,362  | -149,644    | -156,005         | -143,216    | -140,887    | -157,467  | -166,700  |
| 6    | BN, AN  | -323,602 | -322,366  | -328,124    | -328,072         | -328,722    | -323,006    | -297,759  | -321,342  |
| 7    | AN, W   | -381,746 | -382,628  | -376,556    | -377,848         | -374,958    | -368,662    | -398,879  | -389,216  |
| 8    | D, D  | -356,316 | -362,038  | -361,288    | -361,633         | -357,580    | -350,187    | -328,621  | -361,705  |
| 9    | W, W  | -422,177 | -421,194  | -417,617    | -417,798         | -420,421    | -414,441    | -440,444  | -423,052  |
| 10   | W, W  | -578,216 | -569,546  | -574,862    | -574,866         | -576,113    | -573,927    | -538,776  | -570,283  |
| 11   | W, AN   | -462,884 | -460,751  | -464,674    | -464,820         | -465,838    | -464,212    | -486,600  | -466,091  |
| 12   | D, D  | -426,045 | -435,430  | -428,360    | -428,372         | -420,510    | -415,263    | -399,604  | -425,830  |
| 13   | W, W  | -418,293 | -413,584  | -410,287    | -410,396         | -420,979    | -416,016    | -423,533  | -415,001  |
| 14   | D, D  | -362,602 | -357,074  | -364,813    | -364,856         | -362,482    | -357,690    | -329,531  | -365,656  |
| 15   | C, C  | -311,088 | -310,976  | -308,072    | -308,157         | -310,503    | -307,550    | -276,848  | -309,804  |
| 16   | D, C  | -278,562 | -288,829  | -277,635    | -277,669         | -275,869    | -257,433    | -262,703  | -288,076  |
| 17   | C, C  | -332,482 | -349,367  | -334,626    | -333,654         | -347,362    | -335,410    | -291,423  | -336,828  |
| 18   | C, C  | -244,462 | -247,024  | -240,765    | -243,642         | -234,858    | -235,243    | -196,844  | -244,740  |
| 19   | C, C  | -225,426 | -231,024  | -232,201    | -221,977         | -217,499    | -212,044    | -155,960  | -225,919  |
| 20   | AN, W   | -265,439 | -254,506  | -250,154    | -257,078         | -246,829    | -240,558    | -253,701  | -261,200  |
| 21   | C, C  | -345,826 | -345,322  | -345,990    | -345,274         | -340,915    | -333,144    | -293,399  | -345,921  |
| 22   | W, W  | -337,097 | -342,997  | -331,042    | -331,057         | -329,281    | -324,963    | -330,506  | -343,098  |
| 23   | W, W  | -380,638 | -377,138  | -377,969    | -378,189         | -377,066    | -374,175    | -372,612  | -376,709  |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)        | Alt1 (AF)       | Alt2v1 (AF)     | Alt2v1wTUCP (AF) | Alt2v2 (AF)     | Alt2v3 (AF)     | Alt3 (AF)       | Alt4 (AF)       |
|----------------|---|-----------------|-----------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|
| 24             | W, W  | -437,280        | -442,649        | -437,519        | -437,887         | -437,199        | -434,973        | -424,279        | -437,951        |
| 25             | W, W  | -476,173        | -466,824        | -475,966        | -476,254         | -475,972        | -474,194        | -435,913        | -473,236        |
| 26             | W, AN   | -433,338        | -433,168        | -432,782        | -432,914         | -433,159        | -431,876        | -454,767        | -435,168        |
| 27             | AN, AN  | -424,346        | -421,954        | -425,000        | -425,090         | -425,234        | -421,926        | -427,023        | -425,065        |
| 28             | D, D  | -419,314        | -425,855        | -423,239        | -423,308         | -420,781        | -411,946        | -383,659        | -423,365        |
| 29             | D, D  | -377,906        | -370,817        | -369,640        | -369,752         | -367,734        | -357,403        | -366,350        | -366,115        |
| 30             | AN, BN  | -338,739        | -337,796        | -339,591        | -339,573         | -348,969        | -339,388        | -354,779        | -345,523        |
| 31             | BN, D   | -402,146        | -397,740        | -401,652        | -401,619         | -403,372        | -393,267        | -398,283        | -401,148        |
| 32             | AN, W   | -435,657        | -430,570        | -432,031        | -432,081         | -439,000        | -426,688        | -418,362        | -430,530        |
| 33             | W, W  | -480,016        | -490,053        | -482,636        | -482,909         | -479,756        | -479,007        | -456,826        | -490,450        |
| 34             | D, C  | -423,591        | -404,861        | -412,343        | -412,382         | -411,522        | -405,748        | -425,728        | -403,636        |
| 35             | C, C  | -393,649        | -397,370        | -396,102        | -396,106         | -399,761        | -393,506        | -357,510        | -399,995        |
| 36             | D, BN   | -306,619        | -302,520        | -301,465        | -301,588         | -301,273        | -295,813        | -300,126        | -301,556        |
| 37             | BN, AN  | -316,470        | -312,828        | -311,242        | -311,386         | -318,055        | -318,026        | -339,338        | -313,558        |
| 38             | W, W  | -413,847        | -416,246        | -416,506        | -416,514         | -418,061        | -410,166        | -405,253        | -416,304        |
| 39             | BN, D   | -359,793        | -362,984        | -360,369        | -360,358         | -362,048        | -356,563        | -378,840        | -363,359        |
| 40             | D, C  | -376,708        | -374,396        | -374,997        | -375,090         | -364,281        | -356,678        | -339,604        | -373,778        |
| 41             | C, C  | -283,085        | -279,085        | -276,288        | -276,419         | -288,630        | -283,583        | -228,371        | -277,363        |
| 42             | C, C  | -212,914        | -219,839        | -204,455        | -197,608         | -206,760        | -202,084        | -127,953        | -197,656        |
| <b>Average</b> |   | <b>-366,551</b> | <b>-366,466</b> | <b>-364,962</b> | <b>-364,822</b>  | <b>-364,850</b> | <b>-359,312</b> | <b>-349,314</b> | <b>-366,347</b> |
| <b>Maximum</b> |   | <b>-159,889</b> | <b>-152,362</b> | <b>-149,644</b> | <b>-156,005</b>  | <b>-143,216</b> | <b>-140,887</b> | <b>-127,953</b> | <b>-166,700</b> |
| <b>Minimum</b> |   | <b>-578,216</b> | <b>-569,546</b> | <b>-574,862</b> | <b>-574,866</b>  | <b>-576,113</b> | <b>-573,927</b> | <b>-538,776</b> | <b>-570,283</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-174. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 6 (SR6)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 56,317   | 55,798    | 57,317      | 57,209           | 54,428      | 54,656      | 55,957    | 55,978    |
| 2    | W, W  | 74,376   | 74,626    | 74,686      | 74,610           | 73,060      | 73,010      | 74,258    | 75,065    |
| 3    | C, C  | 118,636  | 119,382   | 118,843     | 118,545          | 118,046     | 119,073     | 123,934   | 118,926   |
| 4    | C, C  | 140,337  | 138,221   | 138,284     | 136,618          | 136,531     | 137,023     | 144,191   | 139,000   |
| 5    | AN, W   | 235,143  | 235,354   | 232,610     | 234,416          | 230,409     | 229,850     | 237,024   | 234,134   |
| 6    | BN, AN  | 152,164  | 153,146   | 151,670     | 152,083          | 150,877     | 150,606     | 158,630   | 154,130   |
| 7    | AN, W   | 107,839  | 106,800   | 109,132     | 109,259          | 107,679     | 108,236     | 104,838   | 106,161   |
| 8    | D, D  | 144,157  | 143,051   | 142,658     | 142,551          | 141,542     | 141,859     | 150,323   | 142,871   |
| 9    | W, W  | 60,013   | 61,120    | 62,393      | 62,421           | 60,038      | 61,379      | 57,607    | 59,970    |
| 10   | W, W  | -21,469  | -20,522   | -21,206     | -21,068          | -22,731     | -21,978     | -15,982   | -20,372   |
| 11   | W, AN   | 28,499   | 26,286    | 27,166      | 27,322           | 25,306      | 26,257      | 23,008    | 27,127    |
| 12   | D, D  | 70,102   | 68,752    | 71,363      | 71,403           | 70,616      | 70,986      | 74,434    | 71,320    |
| 13   | W, W  | 46,012   | 46,968    | 48,130      | 48,109           | 45,450      | 45,679      | 44,748    | 47,208    |
| 14   | D, D  | 105,589  | 107,198   | 105,686     | 105,650          | 104,156     | 105,542     | 111,003   | 104,089   |
| 15   | C, C  | 128,095  | 128,808   | 127,636     | 127,598          | 124,730     | 126,631     | 129,571   | 127,440   |
| 16   | D, C  | 151,230  | 152,121   | 153,833     | 153,913          | 152,856     | 150,906     | 152,445   | 153,311   |
| 17   | C, C  | 123,064  | 123,328   | 120,998     | 120,748          | 120,178     | 121,007     | 125,770   | 121,808   |
| 18   | C, C  | 176,805  | 174,898   | 170,690     | 169,561          | 169,446     | 169,848     | 175,580   | 171,767   |
| 19   | C, C  | 204,725  | 204,404   | 203,382     | 205,102          | 201,888     | 202,089     | 207,741   | 203,409   |
| 20   | AN, W   | 252,478  | 250,548   | 251,676     | 249,788          | 247,425     | 248,674     | 243,537   | 248,988   |
| 21   | C, C  | 159,417  | 159,476   | 158,383     | 158,648          | 157,295     | 158,808     | 165,337   | 158,996   |
| 22   | W, W  | 196,366  | 194,952   | 198,267     | 198,583          | 193,356     | 195,178     | 199,036   | 195,344   |
| 23   | W, W  | 134,972  | 134,373   | 135,052     | 134,928          | 132,677     | 133,420     | 133,469   | 134,583   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 102,086        | 102,566        | 102,937        | 102,812          | 100,811        | 101,195        | 104,508        | 102,753        |
| 25             | W, W  | 57,782         | 59,166         | 57,952         | 57,832           | 55,950         | 56,277         | 63,206         | 58,785         |
| 26             | W, AN   | 57,890         | 56,690         | 57,186         | 57,170           | 54,556         | 54,917         | 53,863         | 56,657         |
| 27             | AN, AN  | 81,744         | 80,888         | 82,587         | 82,504           | 79,599         | 80,119         | 81,605         | 82,480         |
| 28             | D, D  | 92,260         | 92,337         | 93,188         | 93,130           | 90,893         | 91,010         | 100,058        | 91,956         |
| 29             | D, D  | 105,630        | 105,090        | 106,643        | 106,596          | 104,882        | 106,425        | 103,472        | 106,745        |
| 30             | AN, BN  | 102,417        | 103,800        | 102,734        | 102,689          | 98,112         | 98,833         | 97,799         | 100,524        |
| 31             | BN, D   | 97,062         | 96,942         | 97,227         | 97,214           | 94,561         | 95,669         | 97,337         | 96,072         |
| 32             | AN, W   | 67,462         | 69,832         | 68,555         | 68,596           | 65,959         | 66,465         | 70,362         | 69,371         |
| 33             | W, W  | 41,778         | 40,166         | 41,842         | 42,018           | 40,394         | 40,770         | 45,238         | 40,963         |
| 34             | D, C  | 97,633         | 97,770         | 98,136         | 98,023           | 95,913         | 96,144         | 96,337         | 98,839         |
| 35             | C, C  | 98,122         | 97,732         | 97,362         | 97,287           | 95,679         | 96,737         | 104,749        | 97,100         |
| 36             | D, BN   | 121,922        | 120,573        | 123,142        | 123,168          | 128,243        | 129,548        | 123,405        | 121,894        |
| 37             | BN, AN  | 140,081        | 140,243        | 141,758        | 141,813          | 128,235        | 126,489        | 137,834        | 140,627        |
| 38             | W, W  | 80,781         | 79,274         | 81,004         | 80,906           | 75,070         | 75,183         | 81,984         | 80,243         |
| 39             | BN, D   | 116,082        | 114,729        | 115,723        | 115,630          | 111,579        | 111,403        | 112,994        | 115,655        |
| 40             | D, C  | 153,855        | 154,655        | 154,330        | 154,433          | 150,411        | 149,903        | 157,493        | 153,944        |
| 41             | C, C  | 137,685        | 137,154        | 134,258        | 132,688          | 130,744        | 130,488        | 141,769        | 134,606        |
| 42             | C, C  | 216,760        | 214,988        | 216,116        | 218,341          | 213,601        | 212,123        | 226,597        | 216,392        |
| <b>Average</b> |   | <b>114,617</b> | <b>114,373</b> | <b>114,555</b> | <b>114,544</b>   | <b>112,154</b> | <b>112,582</b> | <b>116,121</b> | <b>114,211</b> |
| <b>Maximum</b> |   | <b>252,478</b> | <b>250,548</b> | <b>251,676</b> | <b>249,788</b>   | <b>247,425</b> | <b>248,674</b> | <b>243,537</b> | <b>248,988</b> |
| <b>Minimum</b> |   | <b>-21,469</b> | <b>-20,522</b> | <b>-21,206</b> | <b>-21,068</b>   | <b>-22,731</b> | <b>-21,978</b> | <b>-15,982</b> | <b>-20,372</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-175. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 7 (SR7)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | -14,464  | -19,300   | -15,443     | -15,309          | -14,839     | -14,218     | -15,868   | -16,479   |
| 2    | W, W  | -24,400  | -20,482   | -24,517     | -24,390          | -24,707     | -22,180     | -26,318   | -24,236   |
| 3    | C, C  | -17,566  | -17,507   | -17,081     | -17,317          | -16,297     | -15,576     | -10,383   | -17,105   |
| 4    | C, C  | 31,030   | 33,447    | 25,335      | 24,786           | 25,238      | 27,795      | 33,380    | 27,390    |
| 5    | AN, W   | 45,199   | 41,954    | 44,758      | 46,010           | 45,212      | 48,021      | 41,154    | 44,753    |
| 6    | BN, AN  | 2,462    | 3,423     | 662         | 352              | -377        | 3,273       | 10,919    | 5,291     |
| 7    | AN, W   | -7,933   | -3,087    | -7,805      | -8,055           | -7,063      | -3,586      | -14,010   | -8,787    |
| 8    | D, D  | 7,141    | 3,793     | 7,723       | 7,877            | 7,972       | 12,980      | 12,298    | 5,417     |
| 9    | W, W  | 4,253    | 4,830     | 4,071       | 4,343            | 3,432       | 6,941       | -3,420    | 4,076     |
| 10   | W, W  | -38,849  | -36,508   | -38,812     | -38,598          | -39,118     | -36,116     | -27,927   | -37,091   |
| 11   | W, AN   | -33,038  | -33,315   | -33,706     | -33,390          | -34,064     | -31,302     | -41,678   | -34,096   |
| 12   | D, D  | -31,746  | -33,336   | -32,486     | -32,215          | -30,624     | -27,296     | -28,812   | -33,280   |
| 13   | W, W  | -35,408  | -35,733   | -34,602     | -34,430          | -36,427     | -34,189     | -37,106   | -32,391   |
| 14   | D, D  | -12,079  | -9,954    | -11,772     | -11,818          | -11,665     | -8,249      | -6,688    | -13,852   |
| 15   | C, C  | -1,050   | -2,608    | -2,268      | -2,294           | -3,413      | 1,256       | 3,083     | -2,083    |
| 16   | D, C  | 18,164   | 21,403    | 19,431      | 19,782           | 21,935      | 26,835      | 19,358    | 20,094    |
| 17   | C, C  | -2,045   | -3,845    | -3,424      | -3,657           | -5,817      | -364        | 2,313     | -3,483    |
| 18   | C, C  | 22,646   | 22,812    | 16,288      | 16,262           | 16,837      | 20,837      | 26,822    | 18,612    |
| 19   | C, C  | 26,472   | 27,724    | 30,606      | 28,080           | 31,448      | 33,062      | 34,255    | 27,709    |
| 20   | AN, W   | 27,420   | 25,973    | 25,407      | 26,794           | 23,560      | 32,419      | 16,573    | 24,737    |
| 21   | C, C  | 7,255    | 9,160     | 4,417       | 4,922            | 5,032       | 10,594      | 11,049    | 7,840     |
| 22   | W, W  | 24,153   | 22,210    | 23,948      | 24,466           | 22,552      | 27,189      | 21,710    | 22,537    |
| 23   | W, W  | 17,338   | 16,648    | 16,438      | 16,351           | 15,684      | 19,681      | 13,347    | 16,400    |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | -8,138         | -8,068         | -8,155         | -8,261           | -8,464         | -4,822         | -8,834         | -7,558         |
| 25             | W, W  | -8,808         | -8,646         | -8,722         | -8,838           | -8,972         | -6,291         | -2,439         | -8,702         |
| 26             | W, AN   | -14,497        | -15,683        | -14,425        | -14,528          | -14,822        | -12,792        | -20,911        | -15,975        |
| 27             | AN, AN  | -10,674        | -9,270         | -9,530         | -9,720           | -10,741        | -7,679         | -11,779        | -9,521         |
| 28             | D, D  | -16,566        | -17,370        | -17,554        | -17,931          | -16,884        | -14,260        | -8,801         | -16,495        |
| 29             | D, D  | -58            | 283            | 783            | 846              | 1,524          | 5,423          | -1,155         | 1,948          |
| 30             | AN, BN  | 14,613         | 12,404         | 14,118         | 14,252           | 11,763         | 14,905         | 9,010          | 11,495         |
| 31             | BN, D   | 4,629          | 7,876          | 5,054          | 5,027            | 4,773          | 8,450          | 2,200          | 4,490          |
| 32             | AN, W   | -2,016         | -435           | -2,305         | -2,231           | -3,102         | -543           | 703            | -654           |
| 33             | W, W  | -4,654         | -7,259         | -5,640         | -5,447           | -5,548         | -3,891         | -868           | -5,291         |
| 34             | D, C  | -2,640         | 491            | -150           | -112             | -34            | 1,741          | -5,312         | 393            |
| 35             | C, C  | 2,645          | 512            | -195           | -295             | -1,044         | 3,088          | 9,332          | 120            |
| 36             | D, BN   | 24,481         | 23,461         | 25,674         | 25,606           | 25,790         | 29,542         | 27,585         | 24,644         |
| 37             | BN, AN  | 18,317         | 17,850         | 18,574         | 18,516           | 17,249         | 19,112         | 9,822          | 19,418         |
| 38             | W, W  | 8,799          | 8,906          | 8,581          | 8,517            | 7,908          | 10,685         | 10,198         | 8,402          |
| 39             | BN, D   | 9,837          | 8,630          | 10,061         | 10,041           | 9,615          | 12,304         | 4,901          | 9,476          |
| 40             | D, C  | 4,404          | 2,979          | 4,669          | 4,702            | 7,049          | 9,410          | 10,018         | 5,139          |
| 41             | C, C  | 29,446         | 30,706         | 25,331         | 26,316           | 22,491         | 24,960         | 37,808         | 27,353         |
| 42             | C, C  | 41,915         | 46,339         | 46,202         | 39,806           | 45,287         | 48,007         | 49,733         | 39,738         |
| <b>Average</b> |   | <b>2,523</b>   | <b>2,653</b>   | <b>2,132</b>   | <b>2,020</b>     | <b>1,865</b>   | <b>5,123</b>   | <b>3,459</b>   | <b>2,152</b>   |
| <b>Maximum</b> |   | <b>45,199</b>  | <b>46,339</b>  | <b>46,202</b>  | <b>46,010</b>    | <b>45,287</b>  | <b>48,021</b>  | <b>49,733</b>  | <b>44,753</b>  |
| <b>Minimum</b> |   | <b>-38,849</b> | <b>-36,508</b> | <b>-38,812</b> | <b>-38,598</b>   | <b>-39,118</b> | <b>-36,116</b> | <b>-41,678</b> | <b>-37,091</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-176. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 8 (SR8)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (TAF) | Alt1 (TAF) | Alt2v1 (TAF) | Alt2v1wTUCP (TAF) | Alt2v2 (TAF) | Alt2v3 (TAF) | Alt3 (TAF) | Alt4 (TAF) |
|------|---|-----------|------------|--------------|-------------------|--------------|--------------|------------|------------|
| 1    | W, W  | 263,415   | 261,108    | 262,906      | 262,872           | 263,476      | 263,605      | 268,744    | 262,493    |
| 2    | W, W  | 238,888   | 241,151    | 238,768      | 238,748           | 238,976      | 240,648      | 240,841    | 239,247    |
| 3    | C, C  | 209,053   | 208,610    | 209,275      | 209,188           | 209,575      | 210,481      | 213,209    | 208,780    |
| 4    | C, C  | 200,588   | 203,000    | 198,680      | 198,188           | 198,390      | 199,628      | 201,824    | 198,810    |
| 5    | AN, W   | 325,372   | 321,609    | 326,295      | 327,476           | 326,789      | 328,176      | 330,449    | 326,247    |
| 6    | BN, AN  | 322,710   | 323,040    | 322,664      | 322,132           | 321,912      | 326,310      | 323,182    | 324,056    |
| 7    | AN, W   | 313,332   | 315,650    | 312,718      | 312,415           | 312,537      | 317,701      | 316,269    | 312,981    |
| 8    | D, D  | 234,741   | 233,808    | 236,194      | 236,202           | 235,926      | 239,094      | 234,266    | 234,610    |
| 9    | W, W  | 348,722   | 348,997    | 348,472      | 348,403           | 348,296      | 349,676      | 354,125    | 349,067    |
| 10   | W, W  | 247,434   | 247,536    | 247,538      | 247,509           | 247,496      | 249,020      | 267,103    | 247,658    |
| 11   | W, AN   | 177,119   | 176,597    | 177,429      | 177,484           | 177,365      | 176,138      | 182,474    | 177,025    |
| 12   | D, D  | 166,005   | 165,465    | 165,502      | 165,519           | 166,066      | 169,219      | 169,920    | 165,107    |
| 13   | W, W  | 221,451   | 221,076    | 221,200      | 221,051           | 220,828      | 219,909      | 227,951    | 222,719    |
| 14   | D, D  | 179,478   | 180,703    | 179,857      | 179,662           | 180,002      | 181,916      | 182,245    | 178,996    |
| 15   | C, C  | 195,732   | 194,379    | 194,856      | 194,805           | 194,568      | 196,410      | 198,936    | 194,951    |
| 16   | D, C  | 242,642   | 244,568    | 243,213      | 243,195           | 243,812      | 245,219      | 247,252    | 243,695    |
| 17   | C, C  | 208,025   | 207,118    | 208,029      | 207,756           | 207,746      | 209,687      | 211,015    | 207,452    |
| 18   | C, C  | 241,642   | 241,304    | 239,417      | 240,242           | 239,686      | 240,511      | 246,108    | 240,259    |
| 19   | C, C  | 261,771   | 261,695    | 265,826      | 263,547           | 266,064      | 264,785      | 265,695    | 263,174    |
| 20   | AN, W   | 316,004   | 315,253    | 314,890      | 316,660           | 314,299      | 317,601      | 319,938    | 315,333    |
| 21   | C, C  | 247,103   | 248,326    | 245,818      | 245,880           | 246,163      | 247,773      | 246,313    | 247,880    |
| 22   | W, W  | 365,146   | 364,406    | 365,317      | 365,598           | 364,989      | 365,929      | 371,335    | 364,884    |
| 23   | W, W  | 354,810   | 353,486    | 354,201      | 354,241           | 354,009      | 355,034      | 348,741    | 353,680    |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (TAF)      | Alt1 (TAF)     | Alt2v1 (TAF)   | Alt2v1wTUCP (TAF) | Alt2v2 (TAF)   | Alt2v3 (TAF)   | Alt3 (TAF)     | Alt4 (TAF)     |
|----------------|---|----------------|----------------|----------------|-------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 320,595        | 321,056        | 320,835        | 320,799           | 320,696        | 323,192        | 332,519        | 321,334        |
| 25             | W, W  | 288,940        | 288,220        | 288,936        | 288,991           | 288,953        | 287,910        | 296,758        | 288,917        |
| 26             | W, AN   | 260,618        | 259,526        | 260,535        | 260,542           | 260,394        | 262,554        | 262,614        | 259,776        |
| 27             | AN, AN  | 237,417        | 238,136        | 238,386        | 238,355           | 237,945        | 238,630        | 244,076        | 238,115        |
| 28             | D, D  | 235,086        | 234,904        | 234,497        | 234,503           | 234,912        | 236,876        | 243,451        | 235,552        |
| 29             | D, D  | 232,374        | 232,125        | 232,447        | 232,492           | 232,874        | 233,615        | 235,959        | 232,807        |
| 30             | AN, BN  | 230,867        | 229,287        | 230,800        | 230,795           | 230,365        | 228,546        | 236,828        | 229,756        |
| 31             | BN, D   | 212,407        | 214,195        | 212,736        | 212,785           | 212,712        | 215,093        | 215,125        | 212,496        |
| 32             | AN, W   | 262,787        | 262,859        | 261,996        | 261,960           | 262,211        | 261,502        | 270,749        | 262,397        |
| 33             | W, W  | 328,806        | 328,960        | 329,160        | 329,175           | 328,851        | 329,715        | 336,657        | 329,556        |
| 34             | D, C  | 241,419        | 242,399        | 242,412        | 242,389           | 242,368        | 242,933        | 236,635        | 242,134        |
| 35             | C, C  | 221,074        | 220,545        | 219,642        | 219,837           | 219,809        | 220,699        | 227,866        | 220,488        |
| 36             | D, BN   | 240,544        | 239,767        | 241,011        | 241,113           | 241,398        | 241,724        | 247,798        | 240,496        |
| 37             | BN, AN  | 227,101        | 226,915        | 226,814        | 226,843           | 226,664        | 226,867        | 229,992        | 227,683        |
| 38             | W, W  | 307,458        | 307,673        | 307,506        | 307,501           | 307,489        | 307,440        | 314,448        | 307,184        |
| 39             | BN, D   | 225,736        | 225,378        | 226,037        | 226,031           | 226,042        | 226,734        | 227,600        | 225,708        |
| 40             | D, C  | 241,783        | 240,287        | 241,759        | 241,695           | 242,340        | 242,674        | 248,647        | 241,885        |
| 41             | C, C  | 232,064        | 233,059        | 231,189        | 231,952           | 230,634        | 230,964        | 238,547        | 231,717        |
| 42             | C, C  | 262,645        | 265,589        | 266,718        | 261,680           | 265,844        | 267,324        | 266,982        | 261,690        |
| <b>Average</b> |   | <b>254,545</b> | <b>254,518</b> | <b>254,583</b> | <b>254,481</b>    | <b>254,559</b> | <b>255,702</b> | <b>259,076</b> | <b>254,495</b> |
| <b>Maximum</b> |   | <b>365,146</b> | <b>364,406</b> | <b>365,317</b> | <b>365,598</b>    | <b>364,989</b> | <b>365,929</b> | <b>371,335</b> | <b>364,884</b> |
| <b>Minimum</b> |   | <b>166,005</b> | <b>165,465</b> | <b>165,502</b> | <b>165,519</b>    | <b>166,066</b> | <b>169,219</b> | <b>169,920</b> | <b>165,107</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-177. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 9 (SR9)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | -322,738 | -333,244  | -321,903    | -322,062         | -320,054    | -321,399    | -304,639  | -327,565  |
| 2    | W, W  | -407,801 | -403,110  | -409,276    | -409,468         | -407,734    | -405,990    | -392,173  | -406,534  |
| 3    | C, C  | -469,540 | -466,118  | -471,330    | -471,563         | -464,654    | -466,592    | -422,192  | -468,554  |
| 4    | C, C  | -362,581 | -364,337  | -366,401    | -375,606         | -369,783    | -368,866    | -342,315  | -371,876  |
| 5    | AN, W   | -172,722 | -186,329  | -174,685    | -165,406         | -172,600    | -172,208    | -181,719  | -173,752  |
| 6    | BN, AN  | -345,258 | -348,060  | -346,188    | -345,832         | -349,048    | -346,732    | -302,459  | -334,719  |
| 7    | AN, W   | -276,704 | -272,764  | -274,735    | -275,528         | -270,308    | -269,888    | -277,447  | -281,715  |
| 8    | D, D  | -364,713 | -375,217  | -365,436    | -365,300         | -360,818    | -362,484    | -325,855  | -369,869  |
| 9    | W, W  | -269,755 | -268,615  | -266,067    | -265,896         | -268,456    | -267,887    | -269,686  | -269,202  |
| 10   | W, W  | -369,701 | -367,712  | -369,676    | -369,676         | -368,601    | -368,823    | -320,974  | -366,597  |
| 11   | W, AN   | -453,372 | -459,877  | -457,531    | -457,369         | -455,869    | -455,482    | -453,797  | -458,504  |
| 12   | D, D  | -472,652 | -479,946  | -470,257    | -470,289         | -464,084    | -463,093    | -437,794  | -470,688  |
| 13   | W, W  | -384,762 | -385,836  | -383,382    | -383,513         | -386,543    | -387,642    | -369,548  | -381,450  |
| 14   | D, D  | -441,032 | -438,341  | -441,209    | -441,203         | -436,934    | -436,867    | -401,741  | -449,318  |
| 15   | C, C  | -394,041 | -403,083  | -401,166    | -401,011         | -406,899    | -395,951    | -367,672  | -397,887  |
| 16   | D, C  | -318,812 | -310,317  | -311,782    | -311,575         | -299,055    | -306,824    | -296,458  | -312,157  |
| 17   | C, C  | -397,828 | -395,792  | -392,262    | -396,047         | -397,272    | -392,689    | -354,706  | -393,814  |
| 18   | C, C  | -338,333 | -336,423  | -333,983    | -337,697         | -342,273    | -334,700    | -304,406  | -340,951  |
| 19   | C, C  | -301,413 | -297,393  | -280,764    | -282,741         | -278,643    | -278,938    | -262,708  | -287,938  |
| 20   | AN, W   | -206,080 | -231,877  | -221,613    | -217,974         | -225,330    | -224,144    | -241,776  | -223,081  |
| 21   | C, C  | -373,780 | -372,593  | -379,730    | -379,324         | -372,244    | -372,265    | -342,367  | -373,610  |
| 22   | W, W  | -198,083 | -205,279  | -198,826    | -198,647         | -203,382    | -202,486    | -195,024  | -203,560  |
| 23   | W, W  | -298,662 | -307,783  | -301,761    | -301,836         | -302,156    | -301,358    | -293,924  | -303,102  |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)        | Alt1 (AF)       | Alt2v1 (AF)     | Alt2v1wTUCP (AF) | Alt2v2 (AF)     | Alt2v3 (AF)     | Alt3 (AF)       | Alt4 (AF)       |
|----------------|---|-----------------|-----------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|
| 24             | W, W  | -378,590        | -384,878        | -377,367        | -377,419         | -377,052        | -376,959        | -358,261        | -379,638        |
| 25             | W, W  | -329,893        | -332,811        | -330,503        | -330,494         | -329,906        | -329,636        | -288,631        | -329,260        |
| 26             | W, AN   | -428,904        | -435,054        | -433,113        | -433,112         | -432,464        | -432,459        | -424,442        | -435,388        |
| 27             | AN, AN  | -424,452        | -422,335        | -420,804        | -420,811         | -421,767        | -419,968        | -406,568        | -419,127        |
| 28             | D, D  | -477,502        | -480,794        | -477,390        | -477,660         | -474,328        | -475,659        | -431,081        | -480,292        |
| 29             | D, D  | -387,773        | -385,668        | -385,614        | -385,797         | -382,304        | -377,038        | -372,420        | -379,073        |
| 30             | AN, BN  | -335,169        | -344,330        | -336,841        | -337,008         | -341,614        | -344,267        | -341,101        | -344,864        |
| 31             | BN, D   | -364,306        | -364,054        | -365,380        | -365,297         | -363,735        | -360,990        | -345,172        | -366,398        |
| 32             | AN, W   | -396,015        | -391,312        | -395,192        | -395,076         | -394,549        | -395,481        | -360,609        | -390,896        |
| 33             | W, W  | -349,711        | -359,470        | -351,980        | -352,158         | -349,666        | -349,994        | -315,679        | -354,609        |
| 34             | D, C  | -457,345        | -454,274        | -452,885        | -452,838         | -451,851        | -451,476        | -441,669        | -450,603        |
| 35             | C, C  | -434,787        | -438,746        | -440,959        | -440,873         | -441,590        | -439,387        | -383,754        | -442,180        |
| 36             | D, BN   | -383,937        | -387,728        | -381,632        | -381,537         | -376,478        | -377,779        | -354,803        | -383,294        |
| 37             | BN, AN  | -340,636        | -342,182        | -336,824        | -336,912         | -338,405        | -339,020        | -336,835        | -334,090        |
| 38             | W, W  | -294,233        | -297,705        | -296,712        | -296,674         | -295,475        | -293,983        | -265,265        | -297,544        |
| 39             | BN, D   | -402,038        | -407,388        | -403,807        | -403,946         | -402,108        | -401,994        | -394,842        | -404,390        |
| 40             | D, C  | -378,321        | -381,906        | -377,102        | -377,229         | -366,939        | -368,280        | -337,732        | -377,649        |
| 41             | C, C  | -417,457        | -411,186        | -419,507        | -430,295         | -426,410        | -425,953        | -375,299        | -427,648        |
| 42             | C, C  | -338,161        | -329,833        | -321,261        | -328,805         | -320,427        | -318,775        | -302,321        | -333,854        |
| <b>Average</b> |   | <b>-363,324</b> | <b>-365,755</b> | <b>-362,972</b> | <b>-363,560</b>  | <b>-362,138</b> | <b>-361,486</b> | <b>-340,425</b> | <b>-364,220</b> |
| <b>Maximum</b> |   | <b>-172,722</b> | <b>-186,329</b> | <b>-174,685</b> | <b>-165,406</b>  | <b>-172,600</b> | <b>-172,208</b> | <b>-181,719</b> | <b>-173,752</b> |
| <b>Minimum</b> |   | <b>-477,502</b> | <b>-480,794</b> | <b>-477,390</b> | <b>-477,660</b>  | <b>-474,328</b> | <b>-475,659</b> | <b>-453,797</b> | <b>-480,292</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-178. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 10 (SR10)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | -86,934  | -98,811   | -89,626     | -89,551          | -82,950     | -83,130     | -31,016   | -91,038   |
| 2    | W, W  | -90,092  | -100,691  | -90,673     | -90,740          | -84,575     | -84,916     | -35,612   | -92,308   |
| 3    | C, C  | -90,202  | -100,697  | -90,829     | -90,758          | -84,881     | -85,287     | -36,756   | -94,307   |
| 4    | C, C  | -22,439  | -55,571   | -45,833     | -30,618          | -40,043     | -40,340     | 86,420    | -36,261   |
| 5    | AN, W   | 16,837   | -7,357    | 3,014       | 14,357           | 8,699       | 8,327       | 104,407   | 9,210     |
| 6    | BN, AN  | -67,623  | -78,931   | -72,376     | -68,769          | -66,999     | -67,188     | -8,250    | -70,703   |
| 7    | AN, W   | -43,315  | -57,274   | -46,658     | -44,604          | -40,018     | -39,810     | 15,149    | -48,905   |
| 8    | D, D  | -83,346  | -91,538   | -85,538     | -84,153          | -78,956     | -79,209     | -3,731    | -87,044   |
| 9    | W, W  | -70,507  | -85,448   | -72,135     | -70,904          | -64,371     | -64,491     | 15,864    | -74,020   |
| 10   | W, W  | -84,188  | -96,694   | -85,346     | -84,409          | -79,932     | -79,976     | -11,931   | -87,119   |
| 11   | W, AN   | -118,306 | -128,472  | -119,158    | -118,500         | -114,905    | -115,069    | -61,463   | -120,858  |
| 12   | D, D  | -121,115 | -129,421  | -122,568    | -121,896         | -118,651    | -118,656    | -67,911   | -124,180  |
| 13   | W, W  | -82,237  | -92,330   | -82,986     | -82,337          | -77,506     | -77,738     | -20,570   | -84,922   |
| 14   | D, D  | -113,879 | -120,933  | -114,796    | -114,330         | -110,769    | -110,940    | -61,242   | -116,649  |
| 15   | C, C  | -102,501 | -109,451  | -103,195    | -102,588         | -98,804     | -99,121     | 2,621     | -104,854  |
| 16   | D, C  | -76,754  | -84,134   | -76,146     | -75,934          | -72,744     | -72,195     | 53,559    | -78,155   |
| 17   | C, C  | -59,814  | -67,193   | -58,735     | -58,587          | -54,813     | -54,960     | 28,861    | -60,629   |
| 18   | C, C  | 5,500    | -4,473    | 3,997       | 4,372            | 7,729       | 7,171       | 83,741    | 2,538     |
| 19   | C, C  | 11,891   | 2,255     | 9,947       | 10,634           | 13,620      | 13,514      | 81,302    | 8,979     |
| 20   | AN, W   | 19,504   | 9,631     | 19,445      | 20,100           | 21,857      | 22,230      | 72,845    | 18,370    |
| 21   | C, C  | -32,313  | -41,613   | -35,083     | -34,742          | -31,139     | -31,204     | 15,796    | -35,721   |
| 22   | W, W  | 5,978    | -6,426    | 5,542       | 6,027            | 9,233       | 9,645       | 59,063    | 2,888     |
| 23   | W, W  | -55,264  | -65,498   | -54,196     | -53,887          | -51,608     | -51,180     | 5,880     | -56,961   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)        | Alt1 (AF)       | Alt2v1 (AF)     | Alt2v1wTUCP (AF) | Alt2v2 (AF)     | Alt2v3 (AF)     | Alt3 (AF)      | Alt4 (AF)       |
|----------------|---|-----------------|-----------------|-----------------|------------------|-----------------|-----------------|----------------|-----------------|
| 24             | W, W  | -71,849         | -80,114         | -71,761         | -71,404          | -69,173         | -69,045         | -11,516        | -74,010         |
| 25             | W, W  | -75,615         | -87,106         | -77,127         | -76,764          | -74,993         | -75,041         | -15,345        | -79,318         |
| 26             | W, AN   | -127,581        | -136,372        | -128,630        | -128,425         | -126,742        | -126,710        | -78,467        | -130,398        |
| 27             | AN, AN  | -103,323        | -111,687        | -104,087        | -103,893         | -101,476        | -101,553        | -49,422        | -106,209        |
| 28             | D, D  | -108,958        | -117,376        | -109,704        | -109,513         | -106,180        | -106,060        | -56,868        | -112,647        |
| 29             | D, D  | -99,024         | -108,819        | -99,984         | -99,801          | -95,546         | -95,426         | -9,411         | -103,011        |
| 30             | AN, BN  | -92,878         | -103,039        | -93,014         | -92,896          | -87,844         | -87,864         | 560            | -96,062         |
| 31             | BN, D   | -98,691         | -110,417        | -98,662         | -98,633          | -92,340         | -92,550         | -35,314        | -100,566        |
| 32             | AN, W   | -102,852        | -122,536        | -103,533        | -103,207         | -93,668         | -93,836         | -40,462        | -105,418        |
| 33             | W, W  | -116,548        | -130,787        | -117,988        | -117,799         | -111,157        | -111,364        | -55,924        | -119,944        |
| 34             | D, C  | -119,746        | -129,538        | -120,194        | -120,103         | -115,128        | -115,218        | -63,983        | -121,834        |
| 35             | C, C  | -87,349         | -97,860         | -88,218         | -88,037          | -82,573         | -82,688         | 25,478         | -89,740         |
| 36             | D, BN   | -83,804         | -93,453         | -84,011         | -83,858          | -78,431         | -78,632         | 31,220         | -85,417         |
| 37             | BN, AN  | -72,349         | -82,969         | -72,290         | -72,147          | -65,862         | -65,914         | -6,672         | -72,842         |
| 38             | W, W  | -112,414        | -124,031        | -111,320        | -111,058         | -102,702        | -103,009        | -39,707        | -112,992        |
| 39             | BN, D   | -140,300        | -149,535        | -139,852        | -139,734         | -133,726        | -133,999        | -79,064        | -141,027        |
| 40             | D, C  | -115,057        | -124,510        | -116,548        | -116,281         | -110,662        | -110,930        | -56,594        | -117,627        |
| 41             | C, C  | -47,539         | -71,203         | -62,668         | -57,649          | -57,813         | -57,518         | 10,691         | -61,772         |
| 42             | C, C  | -8,395          | -27,792         | -19,409         | -15,256          | -14,985         | -14,573         | 59,709         | -18,312         |
| <b>Average</b> |   | <b>-74,414</b>  | <b>-86,196</b>  | <b>-76,736</b>  | <b>-75,435</b>   | <b>-71,751</b>  | <b>-71,820</b>  | <b>-4,383</b>  | <b>-77,900</b>  |
| <b>Maximum</b> |   | <b>19,504</b>   | <b>9,631</b>    | <b>19,445</b>   | <b>20,100</b>    | <b>21,857</b>   | <b>22,230</b>   | <b>104,407</b> | <b>18,370</b>   |
| <b>Minimum</b> |   | <b>-140,300</b> | <b>-149,535</b> | <b>-139,852</b> | <b>-139,734</b>  | <b>-133,726</b> | <b>-133,999</b> | <b>-79,064</b> | <b>-141,027</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-179. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 11 (SR11)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | -41,508  | -48,090   | -42,506     | -42,510          | -40,514     | -40,609     | -24,826   | -42,798   |
| 2    | W, W  | -46,627  | -49,609   | -47,314     | -47,331          | -45,427     | -45,516     | -30,786   | -47,676   |
| 3    | C, C  | -19,902  | -19,999   | -20,582     | -20,568          | -18,588     | -18,698     | 2,502     | -21,356   |
| 4    | C, C  | 95,350   | 89,517    | 113,322     | 113,445          | 115,167     | 115,088     | 124,025   | 112,578   |
| 5    | AN, W   | 71,942   | 66,403    | 59,568      | 59,653           | 61,212      | 61,204      | 96,332    | 59,125    |
| 6    | BN, AN  | 31,401   | 29,122    | 30,967      | 30,945           | 32,712      | 32,683      | 48,619    | 30,264    |
| 7    | AN, W   | 7,504    | 6,462     | 6,419       | 6,351            | 8,278       | 8,259       | 25,187    | 5,595     |
| 8    | D, D  | -19,735  | -18,798   | -19,811     | -19,886          | -17,802     | -17,855     | -5,117    | -20,622   |
| 9    | W, W  | -19,549  | -23,472   | -20,773     | -20,818          | -18,681     | -18,745     | -1,773    | -21,527   |
| 10   | W, W  | -31,678  | -37,000   | -32,712     | -32,747          | -30,921     | -30,961     | -18,635   | -33,387   |
| 11   | W, AN   | -97,352  | -93,576   | -97,678     | -97,692          | -96,160     | -96,196     | -68,706   | -98,280   |
| 12   | D, D  | -71,699  | -73,817   | -72,495     | -72,483          | -71,028     | -71,066     | -54,410   | -73,045   |
| 13   | W, W  | -52,944  | -57,367   | -55,460     | -55,470          | -53,951     | -53,984     | -32,169   | -56,002   |
| 14   | D, D  | -39,226  | -39,267   | -37,740     | -37,758          | -36,358     | -36,397     | -12,483   | -38,249   |
| 15   | C, C  | 21,610   | 17,706    | 21,900      | 21,879           | 23,223      | 23,136      | 55,174    | 21,303    |
| 16   | D, C  | 57,441   | 55,488    | 57,569      | 57,664           | 58,223      | 59,512      | 83,949    | 57,133    |
| 17   | C, C  | 65,686   | 61,386    | 65,023      | 64,926           | 66,708      | 65,447      | 89,489    | 65,694    |
| 18   | C, C  | 81,458   | 78,678    | 83,196      | 82,646           | 84,235      | 83,308      | 103,691   | 81,070    |
| 19   | C, C  | 78,746   | 76,463    | 78,171      | 78,867           | 78,973      | 79,918      | 97,268    | 78,556    |
| 20   | AN, W   | 43,274   | 42,776    | 40,356      | 39,926           | 41,653      | 41,310      | 65,950    | 40,642    |
| 21   | C, C  | 46,105   | 40,012    | 42,344      | 41,776           | 43,456      | 42,731      | 63,479    | 42,309    |
| 22   | W, W  | 38,986   | 26,830    | 36,415      | 36,473           | 38,215      | 37,633      | 55,631    | 35,879    |
| 23   | W, W  | -10,352  | -19,243   | -11,035     | -11,069          | -10,228     | -10,009     | 4,847     | -11,608   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)        | Alt1 (AF)       | Alt2v1 (AF)     | Alt2v1wTUCP (AF) | Alt2v2 (AF)     | Alt2v3 (AF)     | Alt3 (AF)      | Alt4 (AF)       |
|----------------|---|-----------------|-----------------|-----------------|------------------|-----------------|-----------------|----------------|-----------------|
| 24             | W, W  | -21,019         | -27,362         | -25,133         | -25,056          | -24,508         | -24,296         | -7,822         | -25,599         |
| 25             | W, W  | -44,696         | -39,140         | -38,594         | -38,646          | -38,002         | -37,956         | -28,325        | -39,188         |
| 26             | W, AN   | -104,526        | -102,571        | -102,913        | -102,932         | -102,405        | -102,314        | -85,198        | -103,439        |
| 27             | AN, AN  | -50,341         | -51,988         | -51,187         | -51,194          | -50,665         | -50,594         | -36,628        | -51,674         |
| 28             | D, D  | -47,270         | -48,418         | -46,347         | -46,336          | -45,361         | -45,332         | -26,255        | -47,012         |
| 29             | D, D  | -35,455         | -37,907         | -35,311         | -35,322          | -34,016         | -34,013         | -9,712         | -36,121         |
| 30             | AN, BN  | -34,189         | -35,928         | -34,012         | -34,014          | -32,412         | -32,405         | -8,405         | -34,779         |
| 31             | BN, D   | -36,546         | -40,158         | -36,443         | -36,429          | -34,455         | -34,570         | -7,697         | -37,160         |
| 32             | AN, W   | -50,584         | -56,732         | -46,067         | -45,966          | -43,821         | -43,905         | -25,920        | -46,628         |
| 33             | W, W  | -65,658         | -65,244         | -69,276         | -69,270          | -67,103         | -67,173         | -44,106        | -69,890         |
| 34             | D, C  | -71,382         | -71,853         | -70,686         | -70,655          | -68,701         | -68,727         | -45,437        | -71,240         |
| 35             | C, C  | -4,671          | -4,663          | -4,746          | -4,686           | -2,735          | -2,703          | 21,090         | -5,082          |
| 36             | D, BN   | 18,222          | 15,240          | 18,283          | 18,331           | 20,585          | 20,530          | 47,716         | 17,630          |
| 37             | BN, AN  | -7,364          | -12,140         | -7,076          | -7,065           | -4,841          | -4,895          | 15,921         | -6,984          |
| 38             | W, W  | 455             | -5,881          | 592             | 602              | 3,043           | 3,006           | 19,574         | 179             |
| 39             | BN, D   | -84,093         | -82,637         | -84,010         | -84,026          | -81,816         | -81,843         | -57,041        | -84,224         |
| 40             | D, C  | -13,466         | -15,444         | -13,330         | -13,391          | -11,155         | -11,125         | 9,736          | -13,369         |
| 41             | C, C  | 61,709          | 58,427          | 78,765          | 79,057           | 80,739          | 80,765          | 89,001         | 78,615          |
| 42             | C, C  | 91,001          | 87,829          | 77,704          | 77,842           | 79,209          | 79,184          | 121,638        | 77,550          |
| <b>Average</b> |   | <b>-7,403</b>   | <b>-10,142</b>  | <b>-7,444</b>   | <b>-7,451</b>    | <b>-5,858</b>   | <b>-5,909</b>   | <b>14,509</b>  | <b>-7,924</b>   |
| <b>Maximum</b> |   | <b>95,350</b>   | <b>89,517</b>   | <b>113,322</b>  | <b>113,445</b>   | <b>115,167</b>  | <b>115,088</b>  | <b>124,025</b> | <b>112,578</b>  |
| <b>Minimum</b> |   | <b>-104,526</b> | <b>-102,571</b> | <b>-102,913</b> | <b>-102,932</b>  | <b>-102,405</b> | <b>-102,314</b> | <b>-85,198</b> | <b>-103,439</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-180. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 12 (SR12)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 86,691   | 82,926    | 86,024      | 86,029           | 88,478      | 88,345      | 103,915   | 85,463    |
| 2    | W, W  | 77,587   | 73,975    | 77,138      | 77,104           | 79,467      | 79,395      | 95,311    | 76,559    |
| 3    | C, C  | 103,406  | 99,819    | 103,166     | 103,153          | 105,553     | 105,407     | 122,306   | 102,045   |
| 4    | C, C  | 172,736  | 168,487   | 172,034     | 172,331          | 174,253     | 174,157     | 190,876   | 170,941   |
| 5    | AN, W   | 186,360  | 182,746   | 185,509     | 186,226          | 187,772     | 187,655     | 201,872   | 185,222   |
| 6    | BN, AN  | 169,643  | 166,723   | 169,485     | 169,556          | 171,683     | 171,547     | 184,643   | 168,573   |
| 7    | AN, W   | 136,714  | 133,749   | 136,585     | 136,588          | 138,874     | 138,784     | 151,724   | 135,559   |
| 8    | D, D  | 116,578  | 113,813   | 116,531     | 116,483          | 119,060     | 119,002     | 132,829   | 115,437   |
| 9    | W, W  | 95,860   | 92,496    | 95,875      | 95,809           | 98,481      | 98,349      | 113,090   | 94,817    |
| 10   | W, W  | 78,228   | 74,966    | 78,215      | 78,201           | 80,423      | 80,292      | 94,790    | 77,309    |
| 11   | W, AN   | 61,898   | 58,819    | 61,924      | 61,936           | 63,788      | 63,662      | 78,406    | 61,061    |
| 12   | D, D  | 74,191   | 71,317    | 73,996      | 74,037           | 75,865      | 75,772      | 91,737    | 73,220    |
| 13   | W, W  | 79,651   | 76,576    | 79,395      | 79,445           | 81,376      | 81,308      | 97,837    | 78,636    |
| 14   | D, D  | 94,038   | 91,288    | 94,008      | 94,012           | 95,867      | 95,772      | 112,591   | 93,236    |
| 15   | C, C  | 142,662  | 139,096   | 142,700     | 142,716          | 144,515     | 144,363     | 163,447   | 141,798   |
| 16   | D, C  | 199,855  | 198,220   | 199,931     | 200,051          | 200,929     | 202,285     | 217,731   | 199,204   |
| 17   | C, C  | 212,474  | 208,378   | 211,920     | 211,851          | 213,969     | 212,628     | 229,340   | 212,371   |
| 18   | C, C  | 232,537  | 229,819   | 234,456     | 233,900          | 235,832     | 234,823     | 247,510   | 232,112   |
| 19   | C, C  | 234,659  | 232,664   | 234,278     | 234,965          | 235,493     | 236,287     | 247,123   | 234,462   |
| 20   | AN, W   | 201,665  | 195,280   | 199,956     | 199,468          | 201,747     | 201,290     | 215,645   | 200,062   |
| 21   | C, C  | 199,145  | 192,877   | 198,130     | 197,585          | 199,677     | 198,996     | 214,138   | 197,974   |
| 22   | W, W  | 175,752  | 173,165   | 175,656     | 175,810          | 177,995     | 177,457     | 191,571   | 174,770   |
| 23   | W, W  | 120,604  | 117,200   | 120,907     | 120,938          | 122,215     | 122,359     | 137,263   | 119,959   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 116,258        | 112,880        | 116,414        | 116,427          | 117,664        | 117,726        | 134,114        | 115,513        |
| 25             | W, W  | 81,102         | 77,663         | 81,120         | 81,138           | 82,236         | 82,210         | 98,792         | 80,253         |
| 26             | W, AN   | 52,045         | 48,737         | 51,957         | 51,960           | 52,916         | 52,929         | 69,216         | 51,162         |
| 27             | AN, AN  | 83,130         | 79,910         | 83,026         | 82,986           | 84,072         | 84,150         | 102,185        | 82,225         |
| 28             | D, D  | 86,374         | 83,018         | 86,255         | 86,280           | 87,751         | 87,786         | 106,532        | 85,187         |
| 29             | D, D  | 99,894         | 96,248         | 99,800         | 99,819           | 101,617        | 101,604        | 121,268        | 98,534         |
| 30             | AN, BN  | 96,203         | 92,651         | 96,250         | 96,264           | 98,399         | 98,339         | 119,394        | 95,003         |
| 31             | BN, D   | 96,759         | 91,898         | 96,850         | 96,853           | 99,419         | 99,248         | 122,302        | 95,754         |
| 32             | AN, W   | 70,574         | 65,248         | 70,556         | 70,637           | 73,510         | 73,374         | 93,194         | 69,684         |
| 33             | W, W  | 57,585         | 52,874         | 57,516         | 57,544           | 60,205         | 60,133         | 78,934         | 56,627         |
| 34             | D, C  | 71,101         | 66,899         | 70,929         | 70,972           | 73,405         | 73,349         | 91,577         | 70,116         |
| 35             | C, C  | 130,827        | 127,569        | 130,198        | 130,287          | 132,840        | 132,859        | 152,422        | 129,563        |
| 36             | D, BN   | 151,012        | 145,647        | 151,249        | 151,298          | 154,120        | 154,065        | 174,219        | 150,327        |
| 37             | BN, AN  | 109,454        | 105,474        | 109,545        | 109,571          | 112,398        | 112,316        | 130,722        | 109,396        |
| 38             | W, W  | 99,814         | 95,383         | 99,992         | 100,028          | 103,201        | 103,101        | 120,926        | 99,275         |
| 39             | BN, D   | 58,882         | 55,458         | 59,040         | 59,065           | 61,658         | 61,544         | 79,247         | 58,590         |
| 40             | D, C  | 120,522        | 117,234        | 120,552        | 120,509          | 123,218        | 123,152        | 140,586        | 120,264        |
| 41             | C, C  | 195,718        | 191,676        | 195,306        | 195,607          | 197,724        | 197,716        | 213,884        | 194,847        |
| 42             | C, C  | 219,566        | 216,570        | 219,307        | 219,727          | 221,004        | 221,208        | 235,930        | 219,050        |
| <b>Average</b> |   | <b>124,994</b> | <b>121,368</b> | <b>124,850</b> | <b>124,885</b>   | <b>126,921</b> | <b>126,827</b> | <b>143,360</b> | <b>124,099</b> |
| <b>Maximum</b> |   | <b>234,659</b> | <b>232,664</b> | <b>234,456</b> | <b>234,965</b>   | <b>126,921</b> | <b>126,827</b> | <b>247,510</b> | <b>234,462</b> |
| <b>Minimum</b> |   | <b>52,045</b>  | <b>48,737</b>  | <b>51,957</b>  | <b>51,960</b>    | <b>126,921</b> | <b>126,827</b> | <b>69,216</b>  | <b>51,162</b>  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-181. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 13 (SR13)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 568,004  | 561,343   | 568,222     | 568,349          | 572,160     | 571,966     | 610,283   | 566,522   |
| 2    | W, W  | 611,917  | 604,747   | 611,771     | 611,742          | 615,986     | 615,558     | 653,896   | 610,290   |
| 3    | C, C  | 624,774  | 617,657   | 624,818     | 624,905          | 628,893     | 628,373     | 663,231   | 622,665   |
| 4    | C, C  | 631,918  | 611,951   | 618,862     | 627,900          | 623,605     | 623,707     | 702,369   | 624,634   |
| 5    | AN, W   | 872,988  | 857,464   | 864,951     | 871,893          | 865,514     | 865,247     | 937,626   | 868,911   |
| 6    | BN, AN  | 693,949  | 683,848   | 691,453     | 693,656          | 694,093     | 693,938     | 747,757   | 691,338   |
| 7    | AN, W   | 711,345  | 702,295   | 709,965     | 711,236          | 713,730     | 713,708     | 754,815   | 708,904   |
| 8    | D, D  | 637,297  | 628,885   | 636,513     | 637,424          | 640,960     | 640,554     | 698,496   | 634,870   |
| 9    | W, W  | 666,214  | 657,657   | 665,663     | 666,312          | 670,188     | 669,857     | 725,101   | 663,944   |
| 10   | W, W  | 837,217  | 828,705   | 836,865     | 837,354          | 841,237     | 840,970     | 885,811   | 834,924   |
| 11   | W, AN   | 608,353  | 599,526   | 608,172     | 608,521          | 612,790     | 612,449     | 655,339   | 606,121   |
| 12   | D, D  | 579,416  | 570,499   | 579,154     | 579,623          | 583,702     | 583,485     | 626,384   | 576,806   |
| 13   | W, W  | 670,199  | 660,992   | 670,062     | 670,552          | 673,777     | 673,394     | 718,126   | 667,760   |
| 14   | D, D  | 592,253  | 583,010   | 592,165     | 592,516          | 596,387     | 596,133     | 640,689   | 589,646   |
| 15   | C, C  | 569,298  | 560,487   | 569,358     | 569,638          | 573,542     | 573,367     | 647,287   | 567,049   |
| 16   | D, C  | 622,425  | 613,606   | 622,763     | 622,873          | 626,868     | 626,296     | 718,026   | 620,388   |
| 17   | C, C  | 618,016  | 609,496   | 618,295     | 618,467          | 622,187     | 621,854     | 687,719   | 615,948   |
| 18   | C, C  | 706,336  | 697,193   | 705,255     | 705,608          | 709,063     | 708,670     | 768,934   | 703,115   |
| 19   | C, C  | 726,203  | 716,439   | 725,287     | 725,564          | 729,459     | 728,954     | 786,996   | 723,138   |
| 20   | AN, W   | 718,610  | 709,035   | 718,499     | 718,504          | 722,365     | 721,874     | 771,768   | 716,172   |
| 21   | C, C  | 705,405  | 696,241   | 705,699     | 705,171          | 709,064     | 709,458     | 755,673   | 703,326   |
| 22   | W, W  | 773,421  | 764,560   | 773,593     | 773,802          | 777,884     | 777,435     | 825,005   | 771,245   |
| 23   | W, W  | 715,392  | 705,791   | 715,831     | 716,059          | 720,016     | 719,789     | 767,530   | 713,387   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 834,342        | 825,075        | 834,588        | 834,768          | 838,760        | 838,453        | 885,313        | 832,009        |
| 25             | W, W  | 731,429        | 721,878        | 731,585        | 731,766          | 735,826        | 735,505        | 783,300        | 729,114        |
| 26             | W, AN   | 565,582        | 556,016        | 565,716        | 565,900          | 569,649        | 569,505        | 617,138        | 563,346        |
| 27             | AN, AN  | 652,618        | 642,803        | 652,814        | 652,926          | 656,780        | 656,468        | 705,432        | 650,298        |
| 28             | D, D  | 614,341        | 604,369        | 614,533        | 614,600          | 618,438        | 618,243        | 666,686        | 611,839        |
| 29             | D, D  | 612,154        | 602,001        | 612,158        | 612,279          | 616,215        | 616,124        | 688,136        | 609,290        |
| 30             | AN, BN  | 595,452        | 584,659        | 595,546        | 595,837          | 599,674        | 599,426        | 674,215        | 592,575        |
| 31             | BN, D   | 597,485        | 587,096        | 597,651        | 597,651          | 601,979        | 601,639        | 657,289        | 594,730        |
| 32             | AN, W   | 619,214        | 608,474        | 619,684        | 619,632          | 624,065        | 623,755        | 676,272        | 616,731        |
| 33             | W, W  | 650,859        | 638,860        | 651,039        | 651,063          | 655,758        | 655,547        | 707,174        | 648,275        |
| 34             | D, C  | 608,380        | 595,138        | 608,383        | 608,660          | 613,081        | 613,086        | 665,451        | 605,511        |
| 35             | C, C  | 623,409        | 611,977        | 623,399        | 623,730          | 628,396        | 628,082        | 712,948        | 620,762        |
| 36             | D, BN   | 609,300        | 598,094        | 609,433        | 609,691          | 614,102        | 613,957        | 699,390        | 606,882        |
| 37             | BN, AN  | 600,669        | 589,281        | 600,937        | 601,147          | 605,822        | 605,576        | 664,646        | 598,563        |
| 38             | W, W  | 730,437        | 718,847        | 730,730        | 731,029          | 735,994        | 735,881        | 793,195        | 728,104        |
| 39             | BN, D   | 641,561        | 629,872        | 641,955        | 642,191          | 647,225        | 646,826        | 703,378        | 639,311        |
| 40             | D, C  | 647,029        | 635,605        | 647,299        | 647,514          | 652,199        | 652,178        | 706,227        | 644,560        |
| 41             | C, C  | 689,406        | 670,373        | 681,048        | 684,187          | 685,274        | 685,231        | 743,200        | 680,090        |
| 42             | C, C  | 699,116        | 686,164        | 692,736        | 695,195          | 696,039        | 696,000        | 745,451        | 693,014        |
| <b>Average</b> |   | <b>661,518</b> | <b>651,143</b> | <b>660,582</b> | <b>661,368</b>   | <b>664,732</b> | <b>664,489</b> | <b>720,088</b> | <b>658,717</b> |
| <b>Maximum</b> |   | <b>872,988</b> | <b>857,464</b> | <b>864,951</b> | <b>871,893</b>   | <b>865,514</b> | <b>865,247</b> | <b>937,626</b> | <b>868,911</b> |
| <b>Minimum</b> |   | <b>565,582</b> | <b>556,016</b> | <b>565,716</b> | <b>565,900</b>   | <b>569,649</b> | <b>569,505</b> | <b>610,283</b> | <b>563,346</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-182. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 14 (SR14)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 54,411   | 54,572    | 54,799      | 54,800           | 54,812      | 54,812      | 52,196    | 54,366    |
| 2    | W, W  | 51,724   | 52,691    | 51,740      | 51,752           | 51,309      | 51,301      | 49,593    | 52,299    |
| 3    | C, C  | 45,124   | 45,861    | 45,124      | 45,128           | 45,150      | 45,140      | 44,188    | 45,700    |
| 4    | C, C  | 45,134   | 45,748    | 45,156      | 45,153           | 44,892      | 44,910      | 43,162    | 45,448    |
| 5    | AN, W   | 112,685  | 112,833   | 112,688     | 112,697          | 112,635     | 112,591     | 111,050   | 112,746   |
| 6    | BN, AN  | 53,314   | 53,690    | 53,426      | 53,477           | 53,449      | 53,422      | 52,272    | 53,549    |
| 7    | AN, W   | 77,857   | 77,896    | 77,860      | 77,869           | 77,648      | 77,655      | 75,686    | 78,000    |
| 8    | D, D  | 48,445   | 49,283    | 48,429      | 48,434           | 48,455      | 48,447      | 47,660    | 48,422    |
| 9    | W, W  | 67,132   | 67,225    | 67,122      | 67,139           | 67,149      | 67,160      | 65,077    | 67,131    |
| 10   | W, W  | 142,507  | 142,472   | 142,512     | 142,512          | 142,301     | 142,291     | 140,273   | 142,501   |
| 11   | W, AN   | 57,980   | 56,808    | 58,404      | 58,417           | 58,208      | 58,202      | 53,647    | 58,544    |
| 12   | D, D  | 47,273   | 44,748    | 47,246      | 47,253           | 47,174      | 47,177      | 46,116    | 47,437    |
| 13   | W, W  | 81,273   | 77,512    | 81,161      | 81,155           | 81,027      | 81,070      | 78,616    | 81,202    |
| 14   | D, D  | 45,582   | 40,830    | 45,232      | 45,233           | 45,136      | 45,143      | 44,200    | 44,944    |
| 15   | C, C  | 43,452   | 41,899    | 43,423      | 43,426           | 43,395      | 43,385      | 42,721    | 43,467    |
| 16   | D, C  | 43,935   | 43,951    | 43,947      | 43,959           | 44,042      | 43,949      | 43,417    | 43,984    |
| 17   | C, C  | 40,778   | 40,814    | 40,700      | 40,648           | 40,644      | 40,651      | 39,317    | 40,792    |
| 18   | C, C  | 53,328   | 53,575    | 53,278      | 53,256           | 53,143      | 53,205      | 51,230    | 53,332    |
| 19   | C, C  | 50,267   | 50,494    | 50,296      | 50,227           | 50,229      | 50,246      | 48,104    | 50,212    |
| 20   | AN, W   | 92,748   | 92,631    | 92,702      | 92,700           | 92,703      | 92,722      | 91,200    | 92,681    |
| 21   | C, C  | 45,784   | 45,949    | 45,803      | 45,877           | 45,783      | 45,583      | 43,867    | 45,895    |
| 22   | W, W  | 105,251  | 105,262   | 105,169     | 105,191          | 105,162     | 105,155     | 103,974   | 105,254   |
| 23   | W, W  | 65,587   | 65,554    | 65,582      | 65,569           | 65,587      | 65,599      | 64,339    | 65,581    |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 78,516         | 78,520         | 78,540         | 78,550           | 78,657         | 78,656         | 77,576         | 78,537         |
| 25             | W, W  | 122,074        | 122,049        | 122,081        | 122,082          | 122,095        | 122,095        | 122,156        | 122,076        |
| 26             | W, AN   | 46,196         | 46,164         | 46,199         | 46,204           | 46,218         | 46,218         | 46,031         | 46,182         |
| 27             | AN, AN  | 52,036         | 51,985         | 52,028         | 52,020           | 52,060         | 52,068         | 50,945         | 52,042         |
| 28             | D, D  | 51,544         | 51,516         | 51,543         | 51,542           | 51,560         | 51,570         | 50,331         | 51,475         |
| 29             | D, D  | 44,583         | 44,575         | 44,595         | 44,595           | 44,589         | 44,596         | 42,702         | 44,561         |
| 30             | AN, BN  | 45,831         | 45,880         | 45,788         | 45,788           | 45,762         | 45,787         | 44,059         | 45,807         |
| 31             | BN, D   | 47,306         | 47,502         | 47,326         | 47,329           | 47,284         | 47,305         | 45,378         | 47,310         |
| 32             | AN, W   | 67,149         | 67,065         | 67,106         | 67,098           | 67,119         | 67,121         | 66,092         | 67,099         |
| 33             | W, W  | 53,270         | 53,378         | 53,421         | 53,406           | 53,442         | 53,442         | 52,589         | 53,430         |
| 34             | D, C  | 46,946         | 46,961         | 46,950         | 46,950           | 46,935         | 46,938         | 45,379         | 46,939         |
| 35             | C, C  | 50,284         | 50,386         | 50,277         | 50,277           | 50,083         | 50,080         | 48,464         | 50,252         |
| 36             | D, BN   | 44,886         | 45,442         | 44,869         | 44,837           | 44,529         | 44,476         | 42,782         | 44,940         |
| 37             | BN, AN  | 54,272         | 54,662         | 54,184         | 54,197           | 53,987         | 53,996         | 52,484         | 54,375         |
| 38             | W, W  | 72,410         | 72,414         | 72,404         | 72,406           | 72,356         | 72,353         | 71,781         | 72,423         |
| 39             | BN, D   | 45,773         | 45,815         | 45,824         | 45,825           | 45,803         | 45,831         | 44,544         | 45,825         |
| 40             | D, C  | 46,889         | 47,167         | 47,007         | 46,995           | 46,794         | 46,768         | 44,889         | 47,041         |
| 41             | C, C  | 43,564         | 44,332         | 43,526         | 43,518           | 43,429         | 43,415         | 41,660         | 43,567         |
| 42             | C, C  | 43,095         | 43,710         | 43,170         | 43,098           | 43,081         | 43,109         | 41,443         | 43,105         |
| <b>Average</b> |   | <b>60,195</b>  | <b>60,043</b>  | <b>60,206</b>  | <b>60,204</b>    | <b>60,138</b>  | <b>60,134</b>  | <b>58,647</b>  | <b>60,249</b>  |
| <b>Maximum</b> |   | <b>142,507</b> | <b>142,472</b> | <b>142,512</b> | <b>142,512</b>   | <b>142,301</b> | <b>142,291</b> | <b>140,273</b> | <b>142,501</b> |
| <b>Minimum</b> |   | <b>40,778</b>  | <b>40,814</b>  | <b>40,700</b>  | <b>40,648</b>    | <b>40,644</b>  | <b>40,651</b>  | <b>39,317</b>  | <b>40,792</b>  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-183. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 15 (SR15)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)  | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|-----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 498,682   | 469,581   | 497,528     | 497,548          | 506,289     | 507,317     | 571,695   | 494,615   |
| 2    | W, W  | 395,718   | 366,143   | 395,296     | 395,256          | 404,716     | 404,938     | 471,126   | 391,325   |
| 3    | C, C  | 447,708   | 420,767   | 447,223     | 447,300          | 449,952     | 452,527     | 521,490   | 442,726   |
| 4    | C, C  | 455,669   | 429,402   | 453,354     | 454,579          | 458,585     | 459,709     | 528,179   | 449,878   |
| 5    | AN, W   | 1,030,195 | 1,002,880 | 1,027,215   | 1,029,463        | 1,035,969   | 1,036,358   | 1,114,370 | 1,024,283 |
| 6    | BN, AN  | 473,051   | 446,058   | 472,162     | 472,767          | 480,935     | 481,530     | 548,022   | 467,641   |
| 7    | AN, W   | 815,592   | 779,689   | 815,319     | 815,717          | 831,839     | 831,983     | 940,752   | 806,097   |
| 8    | D, D  | 397,964   | 373,156   | 397,121     | 397,399          | 407,375     | 407,659     | 479,072   | 391,962   |
| 9    | W, W  | 667,630   | 632,056   | 667,852     | 668,080          | 682,799     | 682,636     | 797,369   | 659,791   |
| 10   | W, W  | 546,731   | 510,989   | 547,372     | 547,632          | 563,772     | 563,443     | 694,299   | 538,765   |
| 11   | W, AN   | 389,556   | 362,295   | 389,640     | 389,802          | 400,712     | 400,637     | 502,725   | 383,747   |
| 12   | D, D  | 409,764   | 385,672   | 408,877     | 408,926          | 418,212     | 418,329     | 495,605   | 403,931   |
| 13   | W, W  | 569,711   | 536,070   | 570,085     | 570,351          | 584,622     | 584,212     | 705,666   | 561,945   |
| 14   | D, D  | 404,177   | 374,157   | 404,470     | 404,650          | 415,010     | 414,828     | 506,789   | 397,982   |
| 15   | C, C  | 360,857   | 334,261   | 362,521     | 362,382          | 370,097     | 370,657     | 449,121   | 356,914   |
| 16   | D, C  | 403,001   | 376,480   | 404,802     | 404,807          | 414,250     | 414,061     | 496,592   | 399,245   |
| 17   | C, C  | 431,653   | 404,466   | 432,786     | 433,067          | 441,010     | 440,559     | 516,725   | 427,852   |
| 18   | C, C  | 477,575   | 450,739   | 477,917     | 478,425          | 485,479     | 485,889     | 560,849   | 473,410   |
| 19   | C, C  | 474,859   | 449,330   | 474,884     | 475,192          | 481,947     | 482,348     | 553,084   | 470,223   |
| 20   | AN, W   | 496,398   | 466,602   | 496,165     | 496,460          | 503,266     | 503,168     | 569,912   | 491,938   |
| 21   | C, C  | 518,013   | 491,209   | 517,776     | 517,719          | 525,298     | 525,630     | 590,016   | 513,190   |
| 22   | W, W  | 958,543   | 919,410   | 960,398     | 960,625          | 973,908     | 973,937     | 1,087,695 | 951,267   |
| 23   | W, W  | 683,987   | 645,717   | 684,453     | 684,642          | 692,598     | 694,922     | 801,895   | 677,097   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)         | Alt1 (AF)        | Alt2v1 (AF)      | Alt2v1wTUCP (AF) | Alt2v2 (AF)      | Alt2v3 (AF)      | Alt3 (AF)        | Alt4 (AF)        |
|----------------|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 24             | W, W  | 609,626          | 570,672          | 607,664          | 607,828          | 618,424          | 619,576          | 751,004          | 599,937          |
| 25             | W, W  | 518,848          | 483,894          | 518,137          | 518,299          | 528,411          | 529,056          | 649,285          | 511,113          |
| 26             | W, AN   | 352,712          | 320,854          | 352,237          | 352,369          | 358,841          | 359,491          | 448,708          | 347,441          |
| 27             | AN, AN  | 427,481          | 392,540          | 425,918          | 426,056          | 434,186          | 434,798          | 521,771          | 420,600          |
| 28             | D, D  | 417,053          | 381,739          | 415,957          | 415,971          | 425,521          | 426,062          | 505,052          | 409,844          |
| 29             | D, D  | 378,404          | 342,253          | 377,928          | 378,009          | 387,292          | 387,835          | 467,216          | 371,488          |
| 30             | AN, BN  | 404,312          | 369,707          | 404,192          | 404,345          | 413,239          | 413,569          | 495,620          | 398,133          |
| 31             | BN, D   | 400,923          | 361,853          | 399,486          | 399,737          | 409,816          | 410,141          | 490,834          | 394,030          |
| 32             | AN, W   | 626,479          | 580,492          | 624,777          | 625,008          | 635,875          | 636,124          | 723,554          | 618,556          |
| 33             | W, W  | 664,246          | 607,859          | 663,786          | 664,159          | 683,021          | 682,916          | 846,041          | 652,792          |
| 34             | D, C  | 421,882          | 383,746          | 420,216          | 420,382          | 431,025          | 431,251          | 520,430          | 415,303          |
| 35             | C, C  | 396,542          | 359,146          | 394,987          | 395,185          | 406,085          | 406,038          | 489,876          | 390,569          |
| 36             | D, BN   | 434,310          | 399,666          | 433,586          | 433,809          | 446,121          | 446,268          | 524,265          | 429,716          |
| 37             | BN, AN  | 759,887          | 721,621          | 759,722          | 759,930          | 774,095          | 774,207          | 865,483          | 754,368          |
| 38             | W, W  | 779,379          | 723,569          | 779,482          | 779,728          | 800,738          | 800,423          | 962,204          | 769,267          |
| 39             | BN, D   | 497,357          | 464,282          | 497,066          | 497,254          | 509,024          | 508,995          | 604,949          | 493,040          |
| 40             | D, C  | 410,045          | 378,888          | 410,446          | 410,638          | 420,118          | 421,467          | 502,188          | 407,306          |
| 41             | C, C  | 483,747          | 456,529          | 483,571          | 484,794          | 491,341          | 492,575          | 563,141          | 480,785          |
| 42             | C, C  | 479,985          | 446,846          | 477,003          | 479,157          | 484,986          | 485,556          | 557,154          | 475,096          |
| <b>Average</b> |   | <b>518,339</b>   | <b>485,078</b>   | <b>517,890</b>   | <b>518,225</b>   | <b>528,257</b>   | <b>528,658</b>   | <b>618,853</b>   | <b>512,267</b>   |
| <b>Maximum</b> |   | <b>1,030,195</b> | <b>1,002,880</b> | <b>1,027,215</b> | <b>1,029,463</b> | <b>1,035,969</b> | <b>1,036,358</b> | <b>1,114,370</b> | <b>1,024,283</b> |
| <b>Minimum</b> |   | <b>352,712</b>   | <b>320,854</b>   | <b>352,237</b>   | <b>352,369</b>   | <b>358,841</b>   | <b>359,491</b>   | <b>448,708</b>   | <b>347,441</b>   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-184. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 16 (SR16)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 33,543   | 32,823    | 33,659      | 33,664           | 34,151      | 34,073      | 37,328    | 33,365    |
| 2    | W, W  | 28,938   | 28,158    | 28,977      | 29,016           | 29,518      | 29,455      | 32,990    | 28,741    |
| 3    | C, C  | 50,047   | 49,256    | 50,089      | 50,132           | 50,633      | 50,565      | 54,063    | 49,830    |
| 4    | C, C  | 75,381   | 74,719    | 75,424      | 75,567           | 76,400      | 76,499      | 79,024    | 75,240    |
| 5    | AN, W   | 68,076   | 67,233    | 68,180      | 68,135           | 68,216      | 68,155      | 72,420    | 67,882    |
| 6    | BN, AN  | 41,810   | 40,907    | 41,898      | 41,928           | 42,364      | 42,339      | 46,208    | 41,603    |
| 7    | AN, W   | 38,082   | 37,219    | 38,187      | 38,219           | 38,694      | 38,660      | 42,414    | 37,890    |
| 8    | D, D  | 41,005   | 39,944    | 41,092      | 41,108           | 41,653      | 41,596      | 45,789    | 40,748    |
| 9    | W, W  | 36,567   | 35,576    | 36,675      | 36,691           | 37,279      | 37,236      | 41,348    | 36,335    |
| 10   | W, W  | 30,644   | 29,492    | 30,739      | 30,749           | 31,386      | 31,334      | 35,841    | 30,365    |
| 11   | W, AN   | 16,585   | 15,329    | 16,679      | 16,695           | 17,538      | 17,481      | 22,141    | 16,286    |
| 12   | D, D  | 26,899   | 25,498    | 26,995      | 27,026           | 27,838      | 27,770      | 32,508    | 26,567    |
| 13   | W, W  | 26,686   | 25,000    | 26,766      | 26,822           | 27,099      | 27,045      | 33,573    | 26,300    |
| 14   | D, D  | 27,123   | 25,367    | 27,235      | 27,254           | 27,827      | 27,774      | 33,933    | 26,717    |
| 15   | C, C  | 41,764   | 39,882    | 41,739      | 41,878           | 42,567      | 42,507      | 48,172    | 41,341    |
| 16   | D, C  | 54,657   | 52,727    | 54,778      | 54,804           | 55,520      | 55,327      | 62,100    | 54,245    |
| 17   | C, C  | 64,099   | 62,270    | 64,240      | 64,253           | 64,995      | 64,907      | 70,880    | 63,668    |
| 18   | C, C  | 72,526   | 70,746    | 72,612      | 72,708           | 73,410      | 73,332      | 79,654    | 72,118    |
| 19   | C, C  | 73,586   | 71,818    | 73,730      | 73,763           | 74,507      | 74,374      | 80,328    | 73,216    |
| 20   | AN, W   | 57,607   | 55,820    | 57,741      | 57,723           | 58,428      | 58,358      | 64,527    | 57,239    |
| 21   | C, C  | 56,879   | 55,085    | 57,020      | 57,034           | 57,817      | 57,714      | 63,761    | 56,499    |
| 22   | W, W  | 49,308   | 47,632    | 49,484      | 49,490           | 50,288      | 50,200      | 57,088    | 48,966    |
| 23   | W, W  | 42,364   | 40,661    | 42,572      | 42,581           | 43,382      | 43,296      | 49,894    | 42,046    |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)      | Alt1 (AF)     | Alt2v1 (AF)   | Alt2v1wTUCP (AF) | Alt2v2 (AF)   | Alt2v3 (AF)   | Alt3 (AF)      | Alt4 (AF)     |
|----------------|---|---------------|---------------|---------------|------------------|---------------|---------------|----------------|---------------|
| 24             | W, W  | 35,062        | 33,326        | 35,210        | 35,196           | 36,043        | 35,952        | 42,425         | 34,689        |
| 25             | W, W  | 31,706        | 29,891        | 31,851        | 31,849           | 32,684        | 32,598        | 39,790         | 31,294        |
| 26             | W, AN   | 24,658        | 22,714        | 24,798        | 24,760           | 25,655        | 25,578        | 32,839         | 24,214        |
| 27             | AN, AN  | 27,592        | 25,604        | 27,710        | 27,717           | 28,623        | 28,532        | 35,732         | 27,140        |
| 28             | D, D  | 41,675        | 39,570        | 41,788        | 41,776           | 42,680        | 42,629        | 50,129         | 41,176        |
| 29             | D, D  | 51,900        | 49,610        | 52,021        | 52,040           | 52,978        | 52,891        | 61,122         | 51,331        |
| 30             | AN, BN  | 57,213        | 54,726        | 57,305        | 57,364           | 58,323        | 58,215        | 66,172         | 56,586        |
| 31             | BN, D   | 54,386        | 51,981        | 54,523        | 54,528           | 55,522        | 55,429        | 63,434         | 53,817        |
| 32             | AN, W   | 41,386        | 39,061        | 41,528        | 41,525           | 42,549        | 42,465        | 49,932         | 40,828        |
| 33             | W, W  | 28,148        | 25,685        | 28,282        | 28,290           | 29,344        | 29,276        | 37,141         | 27,569        |
| 34             | D, C  | 47,356        | 44,754        | 47,441        | 47,486           | 48,508        | 48,446        | 56,441         | 46,702        |
| 35             | C, C  | 59,856        | 57,222        | 59,909        | 60,002           | 61,077        | 61,013        | 68,744         | 59,260        |
| 36             | D, BN   | 61,892        | 59,295        | 62,028        | 62,067           | 63,116        | 63,062        | 70,823         | 61,329        |
| 37             | BN, AN  | 56,084        | 53,464        | 56,235        | 56,221           | 57,294        | 57,215        | 65,177         | 55,540        |
| 38             | W, W  | 33,215        | 30,625        | 33,400        | 33,393           | 34,533        | 34,454        | 42,160         | 32,701        |
| 39             | BN, D   | 47,439        | 44,750        | 47,574        | 47,591           | 48,711        | 48,633        | 56,675         | 46,885        |
| 40             | D, C  | 77,821        | 75,276        | 77,954        | 77,949           | 78,950        | 78,943        | 86,574         | 77,180        |
| 41             | C, C  | 94,979        | 92,572        | 95,194        | 95,221           | 96,167        | 96,037        | 104,140        | 94,480        |
| 42             | C, C  | 92,455        | 91,680        | 92,458        | 92,493           | 93,152        | 92,939        | 95,914         | 92,340        |
| <b>Average</b> |   | <b>48,071</b> | <b>46,309</b> | <b>48,184</b> | <b>48,207</b>    | <b>48,986</b> | <b>48,912</b> | <b>55,032</b>  | <b>47,673</b> |
| <b>Maximum</b> |   | <b>94,979</b> | <b>92,572</b> | <b>95,194</b> | <b>95,221</b>    | <b>96,167</b> | <b>96,037</b> | <b>104,140</b> | <b>94,480</b> |
| <b>Minimum</b> |   | <b>16,585</b> | <b>15,329</b> | <b>16,679</b> | <b>16,695</b>    | <b>17,538</b> | <b>17,481</b> | <b>22,141</b>  | <b>16,286</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-185. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 17 (SR17)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 20,348   | 19,355    | 20,383      | 20,397           | 20,948      | 20,907      | 24,702    | 20,102    |
| 2    | W, W  | 47,223   | 46,225    | 47,268      | 47,239           | 47,786      | 47,753      | 51,358    | 47,016    |
| 3    | C, C  | 108,973  | 108,115   | 109,043     | 109,022          | 109,507     | 109,414     | 112,810   | 108,786   |
| 4    | C, C  | 106,389  | 106,265   | 106,409     | 106,396          | 106,476     | 106,471     | 106,933   | 106,358   |
| 5    | AN, W   | 105,838  | 104,620   | 105,942     | 105,941          | 106,612     | 106,566     | 111,308   | 105,525   |
| 6    | BN, AN  | 7,450    | 6,208     | 7,531       | 7,561            | 8,177       | 8,096       | 12,558    | 7,188     |
| 7    | AN, W   | -34,328  | -35,593   | -34,241     | -34,239          | -33,608     | -33,671     | -28,940   | -34,683   |
| 8    | D, D  | 11,658   | 10,532    | 11,785      | 11,797           | 12,348      | 12,276      | 16,701    | 11,422    |
| 9    | W, W  | 25,667   | 24,514    | 25,756      | 25,740           | 26,423      | 26,342      | 30,681    | 25,411    |
| 10   | W, W  | -48,933  | -50,547   | -48,832     | -48,848          | -47,921     | -48,099     | -42,156   | -49,314   |
| 11   | W, AN   | -100,428 | -102,036  | -100,439    | -100,364         | -99,546     | -99,591     | -93,644   | -100,811  |
| 12   | D, D  | -8,000   | -9,668    | -7,948      | -7,849           | -7,063      | -7,193      | -1,222    | -8,263    |
| 13   | W, W  | -13,552  | -15,528   | -13,519     | -13,453          | -12,553     | -12,678     | -6,044    | -13,981   |
| 14   | D, D  | 6,445    | 4,454     | 6,551       | 6,532            | 7,485       | 7,415       | 14,048    | 6,004     |
| 15   | C, C  | 54,276   | 53,394    | 54,318      | 54,443           | 54,992      | 55,094      | 58,577    | 54,144    |
| 16   | D, C  | 60,350   | 60,141    | 60,369      | 60,386           | 60,521      | 60,547      | 61,354    | 60,298    |
| 17   | C, C  | 67,859   | 67,792    | 67,866      | 67,871           | 67,907      | 67,900      | 68,144    | 67,858    |
| 18   | C, C  | 85,107   | 84,952    | 85,130      | 85,103           | 85,181      | 85,196      | 85,643    | 85,083    |
| 19   | C, C  | 69,313   | 69,274    | 69,319      | 69,319           | 69,331      | 69,335      | 69,462    | 69,302    |
| 20   | AN, W   | 120,931  | 119,215   | 121,006     | 121,020          | 121,757     | 121,710     | 127,526   | 120,563   |
| 21   | C, C  | 132,389  | 130,648   | 132,472     | 132,499          | 133,253     | 133,199     | 138,993   | 132,020   |
| 22   | W, W  | 70,705   | 68,714    | 70,851      | 70,840           | 71,757      | 71,697      | 78,619    | 70,299    |
| 23   | W, W  | 34,955   | 32,519    | 35,091      | 35,112           | 36,165      | 36,095      | 44,511    | 34,438    |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)        | Alt1 (AF)       | Alt2v1 (AF)     | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)       |
|----------------|---|-----------------|-----------------|-----------------|------------------|----------------|----------------|----------------|-----------------|
| 24             | W, W  | -15,081         | -17,334         | -14,887         | -14,919          | -13,886        | -13,909        | -5,899         | -15,457         |
| 25             | W, W  | -2,277          | -4,489          | -2,160          | -2,101           | -1,125         | -1,167         | 6,444          | -2,748          |
| 26             | W, AN   | -18,863         | -21,095         | -18,705         | -18,708          | -17,685        | -17,768        | -10,076        | -19,306         |
| 27             | AN, AN  | 17,358          | 15,058          | 17,516          | 17,535           | 18,550         | 18,485         | 26,071         | 16,892          |
| 28             | D, D  | 57,110          | 54,941          | 57,198          | 57,238           | 58,132         | 58,114         | 65,229         | 56,653          |
| 29             | D, D  | 69,377          | 67,936          | 69,420          | 69,434           | 70,028         | 69,973         | 74,788         | 69,037          |
| 30             | AN, BN  | 80,798          | 79,059          | 80,897          | 80,857           | 81,608         | 81,551         | 87,532         | 80,392          |
| 31             | BN, D   | 95,530          | 94,161          | 95,622          | 95,591           | 96,204         | 96,151         | 100,644        | 95,248          |
| 32             | AN, W   | 73,790          | 70,795          | 73,903          | 73,917           | 75,114         | 75,063         | 85,283         | 73,045          |
| 33             | W, W  | 29,510          | 25,676          | 29,686          | 29,692           | 31,192         | 31,169         | 43,412         | 28,664          |
| 34             | D, C  | 64,305          | 60,589          | 64,527          | 64,502           | 66,028         | 65,967         | 76,976         | 63,558          |
| 35             | C, C  | 84,427          | 82,273          | 84,520          | 84,511           | 85,388         | 85,344         | 91,337         | 83,950          |
| 36             | D, BN   | 92,215          | 90,202          | 92,319          | 92,311           | 93,045         | 93,005         | 97,988         | 91,797          |
| 37             | BN, AN  | 135,515         | 131,978         | 135,702         | 135,693          | 137,103        | 137,048        | 147,282        | 134,772         |
| 38             | W, W  | 73,131          | 68,007          | 73,379          | 73,388           | 75,380         | 75,297         | 89,171         | 72,096          |
| 39             | BN, D   | 51,565          | 47,799          | 51,727          | 51,732           | 53,190         | 53,134         | 63,100         | 50,681          |
| 40             | D, C  | 118,297         | 116,415         | 118,376         | 118,386          | 119,068        | 119,049        | 123,675        | 117,924         |
| 41             | C, C  | 134,984         | 133,371         | 135,052         | 135,048          | 135,621        | 135,605        | 139,684        | 134,671         |
| 42             | C, C  | 74,361          | 74,324          | 74,365          | 74,365           | 74,381         | 74,376         | 74,473         | 74,352          |
| <b>Average</b> |   | <b>51,112</b>   | <b>49,363</b>   | <b>51,204</b>   | <b>51,213</b>    | <b>51,983</b>  | <b>51,935</b>  | <b>57,596</b>  | <b>50,738</b>   |
| <b>Maximum</b> |   | <b>135,515</b>  | <b>133,371</b>  | <b>135,702</b>  | <b>135,693</b>   | <b>137,103</b> | <b>137,048</b> | <b>147,282</b> | <b>134,772</b>  |
| <b>Minimum</b> |   | <b>-100,428</b> | <b>-102,036</b> | <b>-100,439</b> | <b>-100,364</b>  | <b>-99,546</b> | <b>-99,591</b> | <b>-93,644</b> | <b>-100,811</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-186. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 18 (SR18)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)   | Alt1 (AF)  | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF)  | Alt4 (AF)  |
|------|---|------------|------------|-------------|------------------|-------------|-------------|------------|------------|
| 1    | W, W  | -55,948    | -95,876    | -57,876     | -57,882          | -56,277     | -55,950     | -26,156    | -59,577    |
| 2    | W, W  | -71,716    | -114,661   | -73,445     | -73,519          | -72,222     | -71,870     | -47,276    | -75,360    |
| 3    | C, C  | -32,689    | -56,291    | -33,798     | -33,806          | -33,630     | -33,166     | -15,225    | -34,819    |
| 4    | C, C  | 41,242     | 32,831     | 40,738      | 40,737           | 40,590      | 40,860      | 50,500     | 40,325     |
| 5    | AN, W   | 129,688    | 114,283    | 128,806     | 128,811          | 128,733     | 129,210     | 146,441    | 128,063    |
| 6    | BN, AN  | -206,456   | -259,039   | -209,698    | -209,716         | -210,181    | -208,344    | -144,294   | -212,271   |
| 7    | AN, W   | -239,087   | -280,294   | -241,240    | -241,385         | -241,589    | -240,028    | -187,660   | -243,590   |
| 8    | D, D  | -288,682   | -329,058   | -290,936    | -291,143         | -290,719    | -289,060    | -235,800   | -293,324   |
| 9    | W, W  | -299,095   | -341,749   | -301,210    | -301,381         | -300,933    | -299,534    | -235,652   | -304,105   |
| 10   | W, W  | -1,058,911 | -1,111,958 | -1,061,347  | -1,061,650       | -1,059,597  | -1,057,963  | -975,882   | -1,065,618 |
| 11   | W, AN   | -1,178,652 | -1,225,956 | -1,180,892  | -1,181,158       | -1,175,747  | -1,174,172  | -1,093,690 | -1,184,634 |
| 12   | D, D  | -701,079   | -749,417   | -706,365    | -706,612         | -698,794    | -697,298    | -624,748   | -709,860   |
| 13   | W, W  | -770,026   | -820,375   | -773,884    | -774,154         | -776,087    | -774,567    | -682,714   | -778,070   |
| 14   | D, D  | -695,612   | -743,579   | -699,014    | -699,264         | -699,574    | -698,073    | -613,216   | -703,313   |
| 15   | C, C  | -380,580   | -422,961   | -383,325    | -383,582         | -383,351    | -381,705    | -306,428   | -386,970   |
| 16   | D, C  | -159,708   | -201,359   | -162,103    | -162,356         | -161,844    | -160,438    | -86,917    | -165,829   |
| 17   | C, C  | -5,905     | -36,545    | -7,472      | -7,631           | -7,198      | -6,193      | 38,166     | -10,203    |
| 18   | C, C  | 54,015     | 30,663     | 53,012      | 52,888           | 53,137      | 54,139      | 82,705     | 50,959     |
| 19   | C, C  | 73,558     | 62,755     | 73,050      | 72,995           | 73,129      | 73,649      | 91,762     | 72,007     |
| 20   | AN, W   | 104,923    | 92,272     | 104,503     | 104,443          | 104,591     | 104,886     | 123,829    | 103,265    |
| 21   | C, C  | 8,607      | -2,754     | 8,176       | 8,074            | 8,604       | 9,063       | 27,280     | 7,110      |
| 22   | W, W  | 29,876     | -10,581    | 28,218      | 27,972           | 28,190      | 29,381      | 81,014     | 24,541     |
| 23   | W, W  | -301,475   | -354,231   | -303,706    | -304,036         | -304,460    | -301,179    | -208,056   | -308,644   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)          | Alt1 (AF)         | Alt2v1 (AF)       | Alt2v1wTUCP (AF)  | Alt2v2 (AF)       | Alt2v3 (AF)       | Alt3 (AF)         | Alt4 (AF)         |
|----------------|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 24             | W, W  | -224,321          | -281,165          | -244,141          | -244,449          | -244,093          | -240,160          | -116,206          | -250,445          |
| 25             | W, W  | -501,793          | -560,754          | -512,721          | -513,117          | -511,575          | -508,294          | -390,687          | -519,096          |
| 26             | W, AN   | -799,674          | -856,309          | -807,269          | -807,607          | -806,731          | -803,811          | -708,458          | -812,505          |
| 27             | AN, AN  | -558,908          | -611,989          | -566,420          | -566,750          | -566,313          | -563,532          | -472,732          | -570,831          |
| 28             | D, D  | -440,600          | -493,351          | -447,387          | -447,711          | -447,059          | -444,261          | -350,279          | -452,094          |
| 29             | D, D  | -210,478          | -265,759          | -217,083          | -217,414          | -216,636          | -213,849          | -127,964          | -222,012          |
| 30             | AN, BN  | -74,326           | -132,517          | -80,642           | -80,980           | -80,037           | -77,303           | 6,881             | -85,450           |
| 31             | BN, D   | -35,589           | -88,885           | -40,126           | -40,364           | -39,574           | -37,596           | 15,368            | -43,914           |
| 32             | AN, W   | -69,279           | -128,067          | -74,817           | -75,119           | -73,896           | -71,471           | 13,805            | -79,895           |
| 33             | W, W  | -185,975          | -257,228          | -192,389          | -192,737          | -189,113          | -186,285          | -78,242           | -199,150          |
| 34             | D, C  | -158,533          | -218,395          | -163,965          | -164,258          | -161,111          | -158,693          | -70,741           | -169,352          |
| 35             | C, C  | 50,456            | 6,847             | 47,777            | 47,571            | 49,470            | 50,654            | 83,186            | 44,832            |
| 36             | D, BN   | 77,361            | 59,944            | 76,017            | 75,941            | 77,530            | 77,684            | 102,558           | 74,550            |
| 37             | BN, AN  | 83,779            | 66,654            | 82,323            | 82,252            | 83,667            | 84,173            | 111,590           | 80,832            |
| 38             | W, W  | -234,064          | -323,221          | -244,505          | -244,848          | -237,925          | -235,771          | -104,697          | -252,544          |
| 39             | BN, D   | -265,702          | -335,061          | -272,670          | -272,955          | -267,287          | -265,471          | -149,696          | -279,060          |
| 40             | D, C  | -34,788           | -89,665           | -39,113           | -39,305           | -36,328           | -35,115           | 22,794            | -43,557           |
| 41             | C, C  | 62,198            | 48,823            | 61,257            | 61,205            | 62,095            | 62,392            | 78,072            | 60,214            |
| 42             | C, C  | 95,667            | 87,764            | 95,036            | 95,006            | 95,697            | 95,859            | 108,386           | 94,406            |
| <b>Average</b> |   | <b>-224,483</b>   | <b>-266,577</b>   | <b>-228,349</b>   | <b>-228,547</b>   | <b>-227,249</b>   | <b>-225,695</b>   | <b>-163,550</b>   | <b>-231,785</b>   |
| <b>Maximum</b> |   | <b>129,688</b>    | <b>114,283</b>    | <b>128,806</b>    | <b>128,811</b>    | <b>128,733</b>    | <b>129,210</b>    | <b>146,441</b>    | <b>128,063</b>    |
| <b>Minimum</b> |   | <b>-1,178,652</b> | <b>-1,225,956</b> | <b>-1,180,892</b> | <b>-1,181,158</b> | <b>-1,175,747</b> | <b>-1,174,172</b> | <b>-1,093,690</b> | <b>-1,184,634</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-187. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 19 (SR19)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 1,879    | 1,878     | 1,879       | 1,879            | 1,879       | 1,882       | 1,880     | 1,879     |
| 2    | W, W  | 3,886    | 3,885     | 3,886       | 3,886            | 3,886       | 3,886       | 3,886     | 3,886     |
| 3    | C, C  | 635      | 635       | 635         | 635              | 635         | 635         | 635       | 635       |
| 4    | C, C  | 932      | 932       | 932         | 932              | 932         | 932         | 932       | 932       |
| 5    | AN, W   | 24,950   | 24,949    | 24,950      | 24,950           | 24,950      | 24,952      | 24,952    | 24,950    |
| 6    | BN, AN  | 10,895   | 10,894    | 10,895      | 10,895           | 10,895      | 10,896      | 10,896    | 10,895    |
| 7    | AN, W   | 19,466   | 19,464    | 19,466      | 19,466           | 19,466      | 19,467      | 19,468    | 19,466    |
| 8    | D, D  | -2,859   | -2,860    | -2,859      | -2,857           | -2,859      | -2,859      | -2,858    | -2,859    |
| 9    | W, W  | 3,829    | 3,828     | 3,829       | 3,830            | 3,829       | 3,829       | 3,830     | 3,828     |
| 10   | W, W  | 46,723   | 46,719    | 46,723      | 46,724           | 46,723      | 46,723      | 46,727    | 46,722    |
| 11   | W, AN   | 11,042   | 11,039    | 11,041      | 11,041           | 11,041      | 11,042      | 11,044    | 11,041    |
| 12   | D, D  | 1,317    | 1,316     | 1,316       | 1,316            | 1,316       | 1,316       | 1,317     | 1,316     |
| 13   | W, W  | 8,937    | 8,932     | 8,934       | 8,934            | 8,934       | 8,934       | 8,937     | 8,934     |
| 14   | D, D  | -3,797   | -3,799    | -3,798      | -3,798           | -3,798      | -3,798      | -3,796    | -3,798    |
| 15   | C, C  | 818      | 817       | 818         | 817              | 820         | 817         | 820       | 817       |
| 16   | D, C  | 1,859    | 1,860     | 1,859       | 1,860            | 1,859       | 1,859       | 1,859     | 1,860     |
| 17   | C, C  | 585      | 585       | 585         | 585              | 585         | 585         | 585       | 585       |
| 18   | C, C  | 573      | 573       | 573         | 573              | 573         | 573         | 573       | 573       |
| 19   | C, C  | 56       | 56        | 56          | 56               | 56          | 56          | 56        | 56        |
| 20   | AN, W   | 7,693    | 7,693     | 7,693       | 7,693            | 7,693       | 7,693       | 7,693     | 7,693     |
| 21   | C, C  | 1,756    | 1,756     | 1,756       | 1,756            | 1,756       | 1,756       | 1,757     | 1,756     |
| 22   | W, W  | -4,638   | -4,644    | -4,637      | -4,640           | -4,635      | -4,638      | -4,631    | -4,638    |
| 23   | W, W  | -626     | -632      | -626        | -628             | -624        | -626        | -621      | -626      |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | -4,156         | -4,161         | -4,155         | -4,157           | -4,153         | -4,155         | -4,149         | -4,155         |
| 25             | W, W  | -17,969        | -17,978        | -17,972        | -17,962          | -17,971        | -17,972        | -17,967        | -17,973        |
| 26             | W, AN   | -11,840        | -11,852        | -11,840        | -11,845          | -11,843        | -11,845        | -11,837        | -11,845        |
| 27             | AN, AN  | 221            | 215            | 221            | 219              | 221            | 220            | 225            | 219            |
| 28             | D, D  | 1,104          | 1,102          | 1,104          | 1,104            | 1,104          | 1,104          | 1,106          | 1,104          |
| 29             | D, D  | 1,389          | 1,389          | 1,389          | 1,389            | 1,389          | 1,389          | 1,388          | 1,389          |
| 30             | AN, BN  | 2,445          | 2,445          | 2,445          | 2,445            | 2,445          | 2,445          | 2,445          | 2,445          |
| 31             | BN, D   | 275            | 275            | 275            | 275              | 275            | 275            | 275            | 275            |
| 32             | AN, W   | 2,604          | 2,597          | 2,603          | 2,601            | 2,603          | 2,603          | 2,611          | 2,602          |
| 33             | W, W  | -6,010         | -6,018         | -6,011         | -6,014           | -6,011         | -6,011         | -5,999         | -6,013         |
| 34             | D, C  | -6,692         | -6,695         | -6,693         | -6,694           | -6,693         | -6,693         | -6,686         | -6,694         |
| 35             | C, C  | 1,852          | 1,852          | 1,852          | 1,852            | 1,852          | 1,852          | 1,853          | 1,852          |
| 36             | D, BN   | 1,404          | 1,404          | 1,404          | 1,404            | 1,404          | 1,404          | 1,404          | 1,404          |
| 37             | BN, AN  | 3,761          | 3,761          | 3,761          | 3,761            | 3,761          | 3,761          | 3,760          | 3,761          |
| 38             | W, W  | -2,350         | -2,358         | -2,351         | -2,352           | -2,350         | -2,351         | -2,340         | -2,352         |
| 39             | BN, D   | -562           | -565           | -562           | -563             | -562           | -562           | -555           | -563           |
| 40             | D, C  | 617            | 616            | 617            | 617              | 617            | 617            | 617            | 617            |
| 41             | C, C  | 182            | 183            | 182            | 182              | 182            | 182            | 182            | 182            |
| 42             | C, C  | 91             | 91             | 91             | 91               | 91             | 91             | 91             | 91             |
| <b>Average</b> |   | <b>2,435</b>   | <b>2,433</b>   | <b>2,435</b>   | <b>2,435</b>     | <b>2,435</b>   | <b>2,435</b>   | <b>2,437</b>   | <b>2,434</b>   |
| <b>Maximum</b> |   | <b>46,723</b>  | <b>46,719</b>  | <b>46,723</b>  | <b>46,724</b>    | <b>46,723</b>  | <b>46,723</b>  | <b>46,727</b>  | <b>46,722</b>  |
| <b>Minimum</b> |   | <b>-17,969</b> | <b>-17,978</b> | <b>-17,972</b> | <b>-17,962</b>   | <b>-17,971</b> | <b>-17,972</b> | <b>-17,967</b> | <b>-17,973</b> |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-188. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 20 (SR20)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 82,874   | 82,873    | 82,874      | 82,874           | 82,874      | 82,874      | 82,875    | 82,874    |
| 2    | W, W  | 69,618   | 69,617    | 69,618      | 69,618           | 69,618      | 69,618      | 69,619    | 69,618    |
| 3    | C, C  | 54,304   | 54,304    | 54,304      | 54,304           | 54,304      | 54,304      | 54,305    | 54,304    |
| 4    | C, C  | 52,424   | 52,424    | 52,424      | 52,424           | 52,424      | 52,424      | 52,426    | 52,424    |
| 5    | AN, W   | 108,282  | 108,281   | 108,282     | 108,282          | 108,282     | 108,282     | 108,283   | 108,282   |
| 6    | BN, AN  | 72,513   | 72,512    | 72,513      | 72,513           | 72,513      | 72,513      | 72,514    | 72,513    |
| 7    | AN, W   | 87,878   | 87,877    | 87,878      | 87,878           | 87,878      | 87,878      | 87,880    | 87,878    |
| 8    | D, D  | 58,548   | 58,548    | 58,549      | 58,548           | 58,549      | 58,549      | 58,550    | 58,548    |
| 9    | W, W  | 92,639   | 92,638    | 92,639      | 92,639           | 92,639      | 92,639      | 92,641    | 92,639    |
| 10   | W, W  | 170,871  | 170,869   | 170,871     | 170,870          | 170,871     | 170,871     | 170,873   | 170,870   |
| 11   | W, AN   | 90,832   | 90,830    | 90,832      | 90,832           | 90,833      | 90,833      | 90,834    | 90,832    |
| 12   | D, D  | 61,817   | 61,816    | 61,817      | 61,817           | 61,818      | 61,818      | 61,820    | 61,817    |
| 13   | W, W  | 83,947   | 83,946    | 83,947      | 83,947           | 83,947      | 83,947      | 83,950    | 83,947    |
| 14   | D, D  | 61,074   | 61,072    | 61,074      | 61,074           | 61,075      | 61,075      | 61,077    | 61,074    |
| 15   | C, C  | 55,041   | 55,040    | 55,042      | 55,041           | 55,042      | 55,042      | 55,044    | 55,041    |
| 16   | D, C  | 64,219   | 64,217    | 64,219      | 64,219           | 64,219      | 64,219      | 64,222    | 64,219    |
| 17   | C, C  | 54,114   | 54,111    | 54,114      | 54,114           | 54,114      | 54,114      | 54,117    | 54,114    |
| 18   | C, C  | 56,680   | 56,677    | 56,680      | 56,680           | 56,680      | 56,680      | 56,683    | 56,679    |
| 19   | C, C  | 51,414   | 51,412    | 51,414      | 51,414           | 51,414      | 51,414      | 51,417    | 51,414    |
| 20   | AN, W   | 67,188   | 67,186    | 67,188      | 67,188           | 67,188      | 67,188      | 67,191    | 67,188    |
| 21   | C, C  | 62,350   | 62,348    | 62,350      | 62,350           | 62,350      | 62,350      | 62,353    | 62,349    |
| 22   | W, W  | 99,843   | 99,841    | 99,843      | 99,843           | 99,843      | 99,843      | 99,846    | 99,843    |
| 23   | W, W  | 80,440   | 80,438    | 80,440      | 80,440           | 80,440      | 80,440      | 80,443    | 80,440    |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 115,444        | 115,441        | 115,444        | 115,444          | 115,444        | 115,444        | 115,448        | 115,443        |
| 25             | W, W  | 178,607        | 178,603        | 178,607        | 178,607          | 178,607        | 178,607        | 178,612        | 178,606        |
| 26             | W, AN   | 78,627         | 78,625         | 78,628         | 78,628           | 78,628         | 78,628         | 78,632         | 78,627         |
| 27             | AN, AN  | 62,381         | 62,378         | 62,382         | 62,382           | 62,382         | 62,382         | 62,387         | 62,381         |
| 28             | D, D  | 54,545         | 54,542         | 54,546         | 54,545           | 54,546         | 54,546         | 54,551         | 54,545         |
| 29             | D, D  | 61,077         | 61,075         | 61,078         | 61,078           | 61,078         | 61,078         | 61,084         | 61,078         |
| 30             | AN, BN  | 72,186         | 72,183         | 72,187         | 72,187           | 72,187         | 72,187         | 72,193         | 72,186         |
| 31             | BN, D   | 51,440         | 51,436         | 51,440         | 51,440           | 51,440         | 51,441         | 51,447         | 51,440         |
| 32             | AN, W   | 66,212         | 66,208         | 66,212         | 66,212           | 66,212         | 66,212         | 66,218         | 66,211         |
| 33             | W, W  | 66,596         | 66,592         | 66,596         | 66,596           | 66,597         | 66,597         | 66,603         | 66,596         |
| 34             | D, C  | 49,059         | 49,055         | 49,060         | 49,059           | 49,060         | 49,060         | 49,067         | 49,059         |
| 35             | C, C  | 68,160         | 68,156         | 68,160         | 68,160           | 68,161         | 68,161         | 68,168         | 68,160         |
| 36             | D, BN   | 60,241         | 60,236         | 60,241         | 60,241           | 60,241         | 60,242         | 60,248         | 60,241         |
| 37             | BN, AN  | 84,166         | 84,161         | 84,166         | 84,166           | 84,166         | 84,167         | 84,174         | 84,166         |
| 38             | W, W  | 131,228        | 131,222        | 131,228        | 131,228          | 131,228        | 131,229        | 131,238        | 131,227        |
| 39             | BN, D   | 52,412         | 52,406         | 52,412         | 52,412           | 52,412         | 52,412         | 52,420         | 52,411         |
| 40             | D, C  | 52,886         | 52,880         | 52,886         | 52,886           | 52,886         | 52,886         | 52,894         | 52,885         |
| 41             | C, C  | 50,775         | 50,770         | 50,775         | 50,775           | 50,776         | 50,776         | 50,785         | 50,775         |
| 42             | C, C  | 49,702         | 49,696         | 49,702         | 49,702           | 49,702         | 49,702         | 49,711         | 49,701         |
| <b>Average</b> |   | <b>74,873</b>  | <b>74,870</b>  | <b>74,873</b>  | <b>74,873</b>    | <b>74,873</b>  | <b>74,873</b>  | <b>74,877</b>  | <b>74,873</b>  |
| <b>Maximum</b> |   | <b>178,607</b> | <b>178,603</b> | <b>178,607</b> | <b>178,607</b>   | <b>178,607</b> | <b>178,607</b> | <b>178,612</b> | <b>178,606</b> |
| <b>Minimum</b> |   | <b>49,059</b>  | <b>49,055</b>  | <b>49,060</b>  | <b>49,059</b>    | <b>49,060</b>  | <b>49,060</b>  | <b>49,067</b>  | <b>49,059</b>  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-189. Simulated Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 21 (SR21)

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF) | Alt1 (AF) | Alt2v1 (AF) | Alt2v1wTUCP (AF) | Alt2v2 (AF) | Alt2v3 (AF) | Alt3 (AF) | Alt4 (AF) |
|------|---|----------|-----------|-------------|------------------|-------------|-------------|-----------|-----------|
| 1    | W, W  | 158,243  | 158,243   | 158,243     | 158,243          | 158,243     | 158,243     | 158,243   | 158,243   |
| 2    | W, W  | 141,562  | 141,562   | 141,562     | 141,562          | 141,561     | 141,561     | 141,561   | 141,562   |
| 3    | C, C  | 17,905   | 17,905    | 17,905      | 17,905           | 17,905      | 17,905      | 17,905    | 17,905    |
| 4    | C, C  | 27,300   | 27,300    | 27,300      | 27,300           | 27,300      | 27,300      | 27,300    | 27,300    |
| 5    | AN, W   | 245,940  | 245,940   | 245,940     | 245,940          | 245,940     | 245,941     | 245,941   | 245,940   |
| 6    | BN, AN  | 220,689  | 220,689   | 220,689     | 220,689          | 220,689     | 220,689     | 220,689   | 220,689   |
| 7    | AN, W   | 289,381  | 289,379   | 289,381     | 289,381          | 289,381     | 289,381     | 289,383   | 289,381   |
| 8    | D, D  | 133,371  | 133,371   | 133,371     | 133,372          | 133,371     | 133,371     | 133,372   | 133,371   |
| 9    | W, W  | 204,240  | 204,240   | 204,240     | 204,240          | 204,240     | 204,240     | 204,240   | 204,240   |
| 10   | W, W  | 387,321  | 387,303   | 387,321     | 387,320          | 387,322     | 387,322     | 387,344   | 387,318   |
| 11   | W, AN   | 223,693  | 223,685   | 223,693     | 223,693          | 223,694     | 223,694     | 223,703   | 223,692   |
| 12   | D, D  | 111,097  | 111,096   | 111,096     | 111,096          | 111,097     | 111,097     | 111,097   | 111,096   |
| 13   | W, W  | 239,829  | 239,822   | 239,829     | 239,828          | 239,829     | 239,829     | 239,838   | 239,828   |
| 14   | D, D  | 122,571  | 122,569   | 122,570     | 122,570          | 122,570     | 122,570     | 122,572   | 122,570   |
| 15   | C, C  | 34,375   | 34,375    | 34,375      | 34,375           | 34,375      | 34,375      | 34,374    | 34,374    |
| 16   | D, C  | 31,236   | 31,237    | 31,236      | 31,236           | 31,236      | 31,236      | 31,235    | 31,236    |
| 17   | C, C  | 8,412    | 8,412     | 8,412       | 8,412            | 8,412       | 8,412       | 8,411     | 8,412     |
| 18   | C, C  | 59,613   | 59,614    | 59,613      | 59,613           | 59,613      | 59,613      | 59,612    | 59,613    |
| 19   | C, C  | 20,965   | 20,966    | 20,965      | 20,965           | 20,965      | 20,965      | 20,964    | 20,965    |
| 20   | AN, W   | 126,801  | 126,802   | 126,801     | 126,801          | 126,801     | 126,801     | 126,800   | 126,801   |
| 21   | C, C  | 103,196  | 103,197   | 103,196     | 103,196          | 103,196     | 103,196     | 103,194   | 103,196   |
| 22   | W, W  | 172,473  | 172,472   | 172,473     | 172,473          | 172,474     | 172,473     | 172,474   | 172,473   |
| 23   | W, W  | 186,738  | 186,732   | 186,737     | 186,737          | 186,738     | 186,738     | 186,745   | 186,737   |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | NAA (AF)       | Alt1 (AF)      | Alt2v1 (AF)    | Alt2v1wTUCP (AF) | Alt2v2 (AF)    | Alt2v3 (AF)    | Alt3 (AF)      | Alt4 (AF)      |
|----------------|---|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| 24             | W, W  | 197,494        | 197,487        | 197,493        | 197,493          | 197,494        | 197,494        | 197,502        | 197,493        |
| 25             | W, W  | 221,350        | 221,326        | 221,349        | 221,347          | 221,351        | 221,351        | 221,383        | 221,346        |
| 26             | W, AN   | 93,609         | 93,591         | 93,609         | 93,606           | 93,610         | 93,610         | 93,634         | 93,606         |
| 27             | AN, AN  | 44,924         | 44,919         | 44,923         | 44,923           | 44,924         | 44,924         | 44,930         | 44,923         |
| 28             | D, D  | 47,043         | 47,041         | 47,042         | 47,042           | 47,043         | 47,043         | 47,045         | 47,042         |
| 29             | D, D  | 37,276         | 37,277         | 37,276         | 37,276           | 37,276         | 37,276         | 37,276         | 37,276         |
| 30             | AN, BN  | 49,545         | 49,547         | 49,545         | 49,545           | 49,545         | 49,545         | 49,542         | 49,545         |
| 31             | BN, D   | 61,046         | 61,048         | 61,046         | 61,046           | 61,046         | 61,046         | 61,043         | 61,046         |
| 32             | AN, W   | 187,954        | 187,949        | 187,954        | 187,953          | 187,954        | 187,954        | 187,961        | 187,953        |
| 33             | W, W  | 211,620        | 211,596        | 211,620        | 211,617          | 211,622        | 211,621        | 211,656        | 211,616        |
| 34             | D, C  | 38,025         | 38,018         | 38,025         | 38,024           | 38,026         | 38,025         | 38,036         | 38,024         |
| 35             | C, C  | 65,988         | 65,987         | 65,988         | 65,987           | 65,988         | 65,988         | 65,988         | 65,987         |
| 36             | D, BN   | 72,662         | 72,663         | 72,662         | 72,662           | 72,662         | 72,662         | 72,659         | 72,662         |
| 37             | BN, AN  | 102,291        | 102,292        | 102,292        | 102,291          | 102,292        | 102,292        | 102,290        | 102,292        |
| 38             | W, W  | 199,128        | 199,124        | 199,128        | 199,128          | 199,128        | 199,128        | 199,135        | 199,128        |
| 39             | BN, D   | 74,480         | 74,472         | 74,480         | 74,479           | 74,481         | 74,481         | 74,488         | 74,479         |
| 40             | D, C  | 24,497         | 24,498         | 24,497         | 24,497           | 24,496         | 24,496         | 24,494         | 24,497         |
| 41             | C, C  | 8,370          | 8,370          | 8,370          | 8,370            | 8,369          | 8,369          | 8,369          | 8,370          |
| 42             | C, C  | 7,637          | 7,637          | 7,637          | 7,637            | 7,637          | 7,637          | 7,637          | 7,637          |
| <b>Average</b> |   | <b>119,331</b> | <b>119,327</b> | <b>119,331</b> | <b>119,330</b>   | <b>119,331</b> | <b>119,331</b> | <b>119,335</b> | <b>119,330</b> |
| <b>Maximum</b> |   | <b>387,321</b> | <b>387,303</b> | <b>387,321</b> | <b>387,320</b>   | <b>387,322</b> | <b>387,322</b> | <b>387,344</b> | <b>387,318</b> |
| <b>Minimum</b> |   | <b>7,637</b>   | <b>7,637</b>   | <b>7,637</b>   | <b>7,637</b>     | <b>7,637</b>   | <b>7,637</b>   | <b>7,637</b>   | <b>7,637</b>   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

**I-1.2.2 Changes in Groundwater-Surface Water Interaction Flow, Alternative 1 Compared to No Action Alternative**

Table I.1-190 through Table I.1-210 provide the annual simulated groundwater-surface water interaction flow through the model simulation period for each of the 21 model subregions for Alternative 1 compared to the No Action Alternative.

Table I.1-190. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 1 (SR1) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 1,754               | 0.6%                          |
| 2    | W, W  | 1,178               | 0.4%                          |
| 3    | C, C  | 1,050               | 0.4%                          |
| 4    | C, C  | -2,771              | -1.1%                         |
| 5    | AN, W   | 1,831               | 0.8%                          |
| 6    | BN, AN  | 4,750               | 1.8%                          |
| 7    | AN, W   | -2,754              | -1.1%                         |
| 8    | D, D  | -160                | -0.1%                         |
| 9    | W, W  | 1,511               | 0.6%                          |
| 10   | W, W  | -1,044              | -0.4%                         |
| 11   | W, AN   | -3,313              | -1.0%                         |
| 12   | D, D  | 232                 | 0.1%                          |
| 13   | W, W  | 1,563               | 0.5%                          |
| 14   | D, D  | -1,032              | -0.4%                         |
| 15   | C, C  | 2,130               | 0.8%                          |
| 16   | D, C  | -2,303              | -0.9%                         |
| 17   | C, C  | 732                 | 0.3%                          |
| 18   | C, C  | -937                | -0.5%                         |
| 19   | C, C  | 1,191               | 0.6%                          |
| 20   | AN, W   | -1,939              | -1.0%                         |
| 21   | C, C  | -888                | -0.4%                         |
| 22   | W, W  | 403                 | 0.2%                          |
| 23   | W, W  | -2,390              | -0.9%                         |
| 24   | W, W  | 1,195               | 0.4%                          |
| 25   | W, W  | -1,155              | -0.4%                         |
| 26   | W, AN   | -1,984              | -0.6%                         |
| 27   | AN, AN  | -575                | -0.2%                         |
| 28   | D, D  | 2,225               | 0.8%                          |
| 29   | D, D  | -1,935              | -0.7%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 30             | AN, BN  | -283                | -0.1%                         |
| 31             | BN, D   | -1,527              | -0.5%                         |
| 32             | AN, W   | 3,251               | 1.2%                          |
| 33             | W, W  | 1,622               | 0.6%                          |
| 34             | D, C  | -4,235              | -1.4%                         |
| 35             | C, C  | 3,112               | 1.1%                          |
| 36             | D, BN   | -1,193              | -0.4%                         |
| 37             | BN, AN  | -652                | -0.3%                         |
| 38             | W, W  | 24                  | 0.0%                          |
| 39             | BN, D   | -2,105              | -0.8%                         |
| 40             | D, C  | 3,914               | 1.5%                          |
| 41             | C, C  | -2,940              | -1.2%                         |
| 42             | C, C  | -6,602              | -3.1%                         |
| <b>Average</b> |   | <b>-263</b>         | <b>-0.1%</b>                  |
| <b>Maximum</b> |   | <b>4,750</b>        | <b>1.8%</b>                   |
| <b>Minimum</b> |   | <b>-6,602</b>       | <b>-3.1%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.

Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-191. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 2 (SR2) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 1,579               | 1.7%                          |
| 2    | W, W  | 1,796               | 3.9%                          |
| 3    | C, C  | 2,895               | 22.2%                         |
| 4    | C, C  | -2,055              | -16.8%                        |
| 5    | AN, W   | 6,633               | 1.8%                          |
| 6    | BN, AN  | 7,430               | 5.4%                          |
| 7    | AN, W   | -8,900              | -4.9%                         |
| 8    | D, D  | -4,346              | -3.5%                         |
| 9    | W, W  | 1,570               | 1.1%                          |
| 10   | W, W  | -2,050              | -13.0%                        |
| 11   | W, AN   | -5,971              | -19.3%                        |
| 12   | D, D  | -308                | -1.0%                         |
| 13   | W, W  | 3,447               | 5.3%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 14             | D, D  | -2,403              | -3.6%                         |
| 15             | C, C  | 305                 | 0.2%                          |
| 16             | D, C  | -8,241              | -4.1%                         |
| 17             | C, C  | -3,665              | -3.2%                         |
| 18             | C, C  | -5,332              | -3.2%                         |
| 19             | C, C  | 1,100               | 0.4%                          |
| 20             | AN, W   | -7,783              | -2.3%                         |
| 21             | C, C  | -3,576              | -4.0%                         |
| 22             | W, W  | -1,842              | -0.7%                         |
| 23             | W, W  | -5,277              | -3.5%                         |
| 24             | W, W  | 2,928               | 3.7%                          |
| 25             | W, W  | -2,722              | -3.3%                         |
| 26             | W, AN   | -4,373              | -136.1%                       |
| 27             | AN, AN  | -1,575              | -3.3%                         |
| 28             | D, D  | 2,710               | 8.0%                          |
| 29             | D, D  | -5,372              | -4.7%                         |
| 30             | AN, BN  | -2,215              | -1.4%                         |
| 31             | BN, D   | -3,793              | -5.0%                         |
| 32             | AN, W   | 3,915               | 5.1%                          |
| 33             | W, W  | 1,330               | 3.6%                          |
| 34             | D, C  | -7,495              | -32.6%                        |
| 35             | C, C  | 5,452               | 6.2%                          |
| 36             | D, BN   | -3,524              | -2.7%                         |
| 37             | BN, AN  | -5,208              | -2.8%                         |
| 38             | W, W  | -314                | -0.2%                         |
| 39             | BN, D   | -3,602              | -5.8%                         |
| 40             | D, C  | 5,645               | 4.4%                          |
| 41             | C, C  | -6,012              | -5.4%                         |
| 42             | C, C  | -3,504              | -1.6%                         |
| <b>Average</b> |   | <b>-1,493</b>       | <b>-5.1%</b>                  |
| <b>Maximum</b> |   | <b>7,430</b>        | <b>22.2%</b>                  |
| <b>Minimum</b> |   | <b>-8,900</b>       | <b>-136.1%</b>                |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-192. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 3 (SR3) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 125                 | 0.1%                          |
| 2    | W, W  | 193                 | 0.2%                          |
| 3    | C, C  | -157                | -0.2%                         |
| 4    | C, C  | -32                 | 0.0%                          |
| 5    | AN, W   | 982                 | 2.0%                          |
| 6    | BN, AN  | 493                 | 0.7%                          |
| 7    | AN, W   | -2,321              | -3.2%                         |
| 8    | D, D  | -1,162              | -1.5%                         |
| 9    | W, W  | -1,235              | -1.4%                         |
| 10   | W, W  | -863                | -0.8%                         |
| 11   | W, AN   | -803                | -0.7%                         |
| 12   | D, D  | -556                | -0.6%                         |
| 13   | W, W  | -235                | -0.3%                         |
| 14   | D, D  | -821                | -1.0%                         |
| 15   | C, C  | -1,805              | -2.3%                         |
| 16   | D, C  | -3,317              | -4.7%                         |
| 17   | C, C  | -4,304              | -6.3%                         |
| 18   | C, C  | -3,968              | -8.0%                         |
| 19   | C, C  | -2,525              | -6.4%                         |
| 20   | AN, W   | -2,001              | -4.5%                         |
| 21   | C, C  | -1,256              | -1.9%                         |
| 22   | W, W  | -1,565              | -2.7%                         |
| 23   | W, W  | -1,401              | -1.8%                         |
| 24   | W, W  | -814                | -0.9%                         |
| 25   | W, W  | -547                | -0.6%                         |
| 26   | W, AN   | -886                | -0.9%                         |
| 27   | AN, AN  | -828                | -0.9%                         |
| 28   | D, D  | -1,028              | -1.2%                         |
| 29   | D, D  | -2,177              | -2.6%                         |
| 30   | AN, BN  | -1,394              | -1.6%                         |
| 31   | BN, D   | -1,052              | -1.1%                         |
| 32   | AN, W   | -1,434              | -1.5%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -1,674              | -1.7%                         |
| 34             | D, C  | -1,438              | -1.5%                         |
| 35             | C, C  | -690                | -0.8%                         |
| 36             | D, BN   | -1,668              | -2.2%                         |
| 37             | BN, AN  | -2,138              | -2.9%                         |
| 38             | W, W  | -1,744              | -2.0%                         |
| 39             | BN, D   | -1,417              | -1.6%                         |
| 40             | D, C  | -1,370              | -1.6%                         |
| 41             | C, C  | -2,072              | -2.9%                         |
| 42             | C, C  | -2,024              | -4.2%                         |
| <b>Average</b> |   | <b>-1,308</b>       | <b>-1.9%</b>                  |
| <b>Maximum</b> |   | <b>982</b>          | <b>2.0%</b>                   |
| <b>Minimum</b> |   | <b>-4,304</b>       | <b>-8.0%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-193. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 4 (SR4) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 1,233               | 0.3%                          |
| 2    | W, W  | 395                 | 0.1%                          |
| 3    | C, C  | 4,377               | 1.2%                          |
| 4    | C, C  | -5,380              | -1.9%                         |
| 5    | AN, W   | 559                 | 0.2%                          |
| 6    | BN, AN  | 15,581              | 4.0%                          |
| 7    | AN, W   | -11,931             | -2.9%                         |
| 8    | D, D  | -9,519              | -2.8%                         |
| 9    | W, W  | 6,685               | 1.5%                          |
| 10   | W, W  | -94                 | 0.0%                          |
| 11   | W, AN   | -11,808             | -2.6%                         |
| 12   | D, D  | -569                | -0.1%                         |
| 13   | W, W  | 7,784               | 1.8%                          |
| 14   | D, D  | -7,575              | -2.2%                         |
| 15   | C, C  | -1,130              | -0.3%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -10,896             | -3.3%                         |
| 17             | C, C  | -3,126              | -0.8%                         |
| 18             | C, C  | -6,927              | -2.2%                         |
| 19             | C, C  | 8,446               | 2.9%                          |
| 20             | AN, W   | -11,598             | -3.3%                         |
| 21             | C, C  | -6,686              | -2.0%                         |
| 22             | W, W  | -1,061              | -0.3%                         |
| 23             | W, W  | -9,808              | -2.7%                         |
| 24             | W, W  | 4,362               | 1.1%                          |
| 25             | W, W  | -8,333              | -2.1%                         |
| 26             | W, AN   | -10,954             | -2.6%                         |
| 27             | AN, AN  | -2,398              | -0.6%                         |
| 28             | D, D  | 3,820               | 1.0%                          |
| 29             | D, D  | -6,014              | -1.5%                         |
| 30             | AN, BN  | -3,160              | -0.8%                         |
| 31             | BN, D   | -9,828              | -2.6%                         |
| 32             | AN, W   | 8,033               | 1.8%                          |
| 33             | W, W  | 85                  | 0.0%                          |
| 34             | D, C  | -14,399             | -3.8%                         |
| 35             | C, C  | 7,397               | 1.9%                          |
| 36             | D, BN   | -5,175              | -1.4%                         |
| 37             | BN, AN  | -6,048              | -1.6%                         |
| 38             | W, W  | 1,684               | 0.4%                          |
| 39             | BN, D   | -8,310              | -2.2%                         |
| 40             | D, C  | 7,567               | 2.0%                          |
| 41             | C, C  | -8,718              | -2.5%                         |
| 42             | C, C  | -7,478              | -2.5%                         |
| <b>Average</b> |   | <b>-2,641</b>       | <b>-0.7%</b>                  |
| <b>Maximum</b> |   | <b>15,581</b>       | <b>4.0%</b>                   |
| <b>Minimum</b> |   | <b>-14,399</b>      | <b>-3.8%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-194. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 5 (SR5) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -5,108              | -1.2%                         |
| 2    | W, W  | 1,116               | 0.3%                          |
| 3    | C, C  | 1,820               | 0.5%                          |
| 4    | C, C  | -6,960              | -2.9%                         |
| 5    | AN, W   | 7,526               | 4.7%                          |
| 6    | BN, AN  | 1,236               | 0.4%                          |
| 7    | AN, W   | -882                | -0.2%                         |
| 8    | D, D  | -5,722              | -1.6%                         |
| 9    | W, W  | 983                 | 0.2%                          |
| 10   | W, W  | 8,670               | 1.5%                          |
| 11   | W, AN   | 2,133               | 0.5%                          |
| 12   | D, D  | -9,385              | -2.2%                         |
| 13   | W, W  | 4,709               | 1.1%                          |
| 14   | D, D  | 5,528               | 1.5%                          |
| 15   | C, C  | 112                 | 0.0%                          |
| 16   | D, C  | -10,267             | -3.7%                         |
| 17   | C, C  | -16,885             | -5.1%                         |
| 18   | C, C  | -2,562              | -1.0%                         |
| 19   | C, C  | -5,597              | -2.5%                         |
| 20   | AN, W   | 10,933              | 4.1%                          |
| 21   | C, C  | 503                 | 0.1%                          |
| 22   | W, W  | -5,900              | -1.8%                         |
| 23   | W, W  | 3,499               | 0.9%                          |
| 24   | W, W  | -5,369              | -1.2%                         |
| 25   | W, W  | 9,348               | 2.0%                          |
| 26   | W, AN   | 171                 | 0.0%                          |
| 27   | AN, AN  | 2,393               | 0.6%                          |
| 28   | D, D  | -6,541              | -1.6%                         |
| 29   | D, D  | 7,088               | 1.9%                          |
| 30   | AN, BN  | 942                 | 0.3%                          |
| 31   | BN, D   | 4,406               | 1.1%                          |
| 32   | AN, W   | 5,088               | 1.2%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -10,037             | -2.1%                         |
| 34             | D, C  | 18,730              | 4.4%                          |
| 35             | C, C  | -3,721              | -0.9%                         |
| 36             | D, BN   | 4,098               | 1.3%                          |
| 37             | BN, AN  | 3,642               | 1.2%                          |
| 38             | W, W  | -2,399              | -0.6%                         |
| 39             | BN, D   | -3,190              | -0.9%                         |
| 40             | D, C  | 2,312               | 0.6%                          |
| 41             | C, C  | 4,000               | 1.4%                          |
| 42             | C, C  | -6,926              | -3.3%                         |
| <b>Average</b> |   | <b>84</b>           | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>18,730</b>       | <b>4.7%</b>                   |
| <b>Minimum</b> |   | <b>-16,885</b>      | <b>-5.1%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-195. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 6 (SR6) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -518                | -0.9%                         |
| 2    | W, W  | 250                 | 0.3%                          |
| 3    | C, C  | 747                 | 0.6%                          |
| 4    | C, C  | -2,116              | -1.5%                         |
| 5    | AN, W   | 210                 | 0.1%                          |
| 6    | BN, AN  | 983                 | 0.6%                          |
| 7    | AN, W   | -1,039              | -1.0%                         |
| 8    | D, D  | -1,106              | -0.8%                         |
| 9    | W, W  | 1,107               | 1.8%                          |
| 10   | W, W  | 947                 | 4.4%                          |
| 11   | W, AN   | -2,214              | -7.8%                         |
| 12   | D, D  | -1,350              | -1.9%                         |
| 13   | W, W  | 956                 | 2.1%                          |
| 14   | D, D  | 1,609               | 1.5%                          |
| 15   | C, C  | 713                 | 0.6%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 891                 | 0.6%                          |
| 17             | C, C  | 264                 | 0.2%                          |
| 18             | C, C  | -1,907              | -1.1%                         |
| 19             | C, C  | -321                | -0.2%                         |
| 20             | AN, W   | -1,930              | -0.8%                         |
| 21             | C, C  | 58                  | 0.0%                          |
| 22             | W, W  | -1,415              | -0.7%                         |
| 23             | W, W  | -600                | -0.4%                         |
| 24             | W, W  | 480                 | 0.5%                          |
| 25             | W, W  | 1,384               | 2.4%                          |
| 26             | W, AN   | -1,201              | -2.1%                         |
| 27             | AN, AN  | -856                | -1.0%                         |
| 28             | D, D  | 77                  | 0.1%                          |
| 29             | D, D  | -540                | -0.5%                         |
| 30             | AN, BN  | 1,383               | 1.4%                          |
| 31             | BN, D   | -119                | -0.1%                         |
| 32             | AN, W   | 2,371               | 3.5%                          |
| 33             | W, W  | -1,612              | -3.9%                         |
| 34             | D, C  | 137                 | 0.1%                          |
| 35             | C, C  | -390                | -0.4%                         |
| 36             | D, BN   | -1,348              | -1.1%                         |
| 37             | BN, AN  | 162                 | 0.1%                          |
| 38             | W, W  | -1,508              | -1.9%                         |
| 39             | BN, D   | -1,353              | -1.2%                         |
| 40             | D, C  | 800                 | 0.5%                          |
| 41             | C, C  | -531                | -0.4%                         |
| 42             | C, C  | -1,771              | -0.8%                         |
| <b>Average</b> |   | <b>-243</b>         | <b>-0.2%</b>                  |
| <b>Maximum</b> |   | <b>2,371</b>        | <b>4.4%</b>                   |
| <b>Minimum</b> |   | <b>-2,214</b>       | <b>-7.8%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-196. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 7 (SR7) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -4,836              | -33.4%                        |
| 2    | W, W  | 3,919               | 16.1%                         |
| 3    | C, C  | 60                  | 0.3%                          |
| 4    | C, C  | 2,416               | 7.8%                          |
| 5    | AN, W   | -3,244              | -7.2%                         |
| 6    | BN, AN  | 961                 | 39.0%                         |
| 7    | AN, W   | 4,846               | 61.1%                         |
| 8    | D, D  | -3,348              | -46.9%                        |
| 9    | W, W  | 577                 | 13.6%                         |
| 10   | W, W  | 2,341               | 6.0%                          |
| 11   | W, AN   | -277                | -0.8%                         |
| 12   | D, D  | -1,590              | -5.0%                         |
| 13   | W, W  | -325                | -0.9%                         |
| 14   | D, D  | 2,125               | 17.6%                         |
| 15   | C, C  | -1,558              | -148.3%                       |
| 16   | D, C  | 3,239               | 17.8%                         |
| 17   | C, C  | -1,800              | -88.0%                        |
| 18   | C, C  | 165                 | 0.7%                          |
| 19   | C, C  | 1,251               | 4.7%                          |
| 20   | AN, W   | -1,447              | -5.3%                         |
| 21   | C, C  | 1,906               | 26.3%                         |
| 22   | W, W  | -1,943              | -8.0%                         |
| 23   | W, W  | -690                | -4.0%                         |
| 24   | W, W  | 70                  | 0.9%                          |
| 25   | W, W  | 162                 | 1.8%                          |
| 26   | W, AN   | -1,186              | -8.2%                         |
| 27   | AN, AN  | 1,405               | 13.2%                         |
| 28   | D, D  | -804                | -4.9%                         |
| 29   | D, D  | 341                 | 586.4%                        |
| 30   | AN, BN  | -2,209              | -15.1%                        |
| 31   | BN, D   | 3,248               | 70.2%                         |
| 32   | AN, W   | 1,581               | 78.4%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -2,605              | -56.0%                        |
| 34             | D, C  | 3,131               | 118.6%                        |
| 35             | C, C  | -2,132              | -80.6%                        |
| 36             | D, BN   | -1,020              | -4.2%                         |
| 37             | BN, AN  | -466                | -2.5%                         |
| 38             | W, W  | 107                 | 1.2%                          |
| 39             | BN, D   | -1,208              | -12.3%                        |
| 40             | D, C  | -1,425              | -32.4%                        |
| 41             | C, C  | 1,260               | 4.3%                          |
| 42             | C, C  | 4,423               | 10.6%                         |
| <b>Average</b> |   | <b>129</b>          | <b>12.7%</b>                  |
| <b>Maximum</b> |   | <b>4,846</b>        | <b>586.4%</b>                 |
| <b>Minimum</b> |   | <b>-4,836</b>       | <b>-148.3%</b>                |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-197. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 8 (SR8) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -2,307              | -0.9%                         |
| 2    | W, W  | 2,263               | 0.9%                          |
| 3    | C, C  | -444                | -0.2%                         |
| 4    | C, C  | 2,412               | 1.2%                          |
| 5    | AN, W   | -3,763              | -1.2%                         |
| 6    | BN, AN  | 329                 | 0.1%                          |
| 7    | AN, W   | 2,318               | 0.7%                          |
| 8    | D, D  | -934                | -0.4%                         |
| 9    | W, W  | 275                 | 0.1%                          |
| 10   | W, W  | 102                 | 0.0%                          |
| 11   | W, AN   | -522                | -0.3%                         |
| 12   | D, D  | -540                | -0.3%                         |
| 13   | W, W  | -375                | -0.2%                         |
| 14   | D, D  | 1,225               | 0.7%                          |
| 15   | C, C  | -1,353              | -0.7%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 1,926               | 0.8%                          |
| 17             | C, C  | -907                | -0.4%                         |
| 18             | C, C  | -338                | -0.1%                         |
| 19             | C, C  | -76                 | 0.0%                          |
| 20             | AN, W   | -751                | -0.2%                         |
| 21             | C, C  | 1,223               | 0.5%                          |
| 22             | W, W  | -740                | -0.2%                         |
| 23             | W, W  | -1,324              | -0.4%                         |
| 24             | W, W  | 460                 | 0.1%                          |
| 25             | W, W  | -720                | -0.2%                         |
| 26             | W, AN   | -1,092              | -0.4%                         |
| 27             | AN, AN  | 719                 | 0.3%                          |
| 28             | D, D  | -182                | -0.1%                         |
| 29             | D, D  | -249                | -0.1%                         |
| 30             | AN, BN  | -1,580              | -0.7%                         |
| 31             | BN, D   | 1,788               | 0.8%                          |
| 32             | AN, W   | 72                  | 0.0%                          |
| 33             | W, W  | 154                 | 0.0%                          |
| 34             | D, C  | 980                 | 0.4%                          |
| 35             | C, C  | -528                | -0.2%                         |
| 36             | D, BN   | -777                | -0.3%                         |
| 37             | BN, AN  | -187                | -0.1%                         |
| 38             | W, W  | 215                 | 0.1%                          |
| 39             | BN, D   | -358                | -0.2%                         |
| 40             | D, C  | -1,496              | -0.6%                         |
| 41             | C, C  | 995                 | 0.4%                          |
| 42             | C, C  | 2,943               | 1.1%                          |
| <b>Average</b> |   | <b>-27</b>          | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>2,943</b>        | <b>1.2%</b>                   |
| <b>Minimum</b> |   | <b>-3,763</b>       | <b>-1.2%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-198. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 9 (SR9) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -10,506             | -3.3%                         |
| 2    | W, W  | 4,691               | 1.2%                          |
| 3    | C, C  | 3,422               | 0.7%                          |
| 4    | C, C  | -1,755              | -0.5%                         |
| 5    | AN, W   | -13,607             | -7.9%                         |
| 6    | BN, AN  | -2,802              | -0.8%                         |
| 7    | AN, W   | 3,940               | 1.4%                          |
| 8    | D, D  | -10,504             | -2.9%                         |
| 9    | W, W  | 1,140               | 0.4%                          |
| 10   | W, W  | 1,989               | 0.5%                          |
| 11   | W, AN   | -6,505              | -1.4%                         |
| 12   | D, D  | -7,295              | -1.5%                         |
| 13   | W, W  | -1,074              | -0.3%                         |
| 14   | D, D  | 2,691               | 0.6%                          |
| 15   | C, C  | -9,041              | -2.3%                         |
| 16   | D, C  | 8,496               | 2.7%                          |
| 17   | C, C  | 2,036               | 0.5%                          |
| 18   | C, C  | 1,909               | 0.6%                          |
| 19   | C, C  | 4,021               | 1.3%                          |
| 20   | AN, W   | -25,797             | -12.5%                        |
| 21   | C, C  | 1,187               | 0.3%                          |
| 22   | W, W  | -7,197              | -3.6%                         |
| 23   | W, W  | -9,121              | -3.1%                         |
| 24   | W, W  | -6,289              | -1.7%                         |
| 25   | W, W  | -2,918              | -0.9%                         |
| 26   | W, AN   | -6,150              | -1.4%                         |
| 27   | AN, AN  | 2,117               | 0.5%                          |
| 28   | D, D  | -3,291              | -0.7%                         |
| 29   | D, D  | 2,105               | 0.5%                          |
| 30   | AN, BN  | -9,161              | -2.7%                         |
| 31   | BN, D   | 252                 | 0.1%                          |
| 32   | AN, W   | 4,702               | 1.2%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -9,758              | -2.8%                         |
| 34             | D, C  | 3,071               | 0.7%                          |
| 35             | C, C  | -3,959              | -0.9%                         |
| 36             | D, BN   | -3,790              | -1.0%                         |
| 37             | BN, AN  | -1,546              | -0.5%                         |
| 38             | W, W  | -3,472              | -1.2%                         |
| 39             | BN, D   | -5,350              | -1.3%                         |
| 40             | D, C  | -3,585              | -0.9%                         |
| 41             | C, C  | 6,271               | 1.5%                          |
| 42             | C, C  | 8,329               | 2.5%                          |
| <b>Average</b> |   | <b>-2,431</b>       | <b>-0.9%</b>                  |
| <b>Maximum</b> |   | <b>8,496</b>        | <b>2.7%</b>                   |
| <b>Minimum</b> |   | <b>-25,797</b>      | <b>-12.5%</b>                 |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-199. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 10 (SR10) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -11,878             | -13.7%                        |
| 2    | W, W  | -10,599             | -11.8%                        |
| 3    | C, C  | -10,495             | -11.6%                        |
| 4    | C, C  | -33,132             | -147.7%                       |
| 5    | AN, W   | -24,193             | -143.7%                       |
| 6    | BN, AN  | -11,308             | -16.7%                        |
| 7    | AN, W   | -13,959             | -32.2%                        |
| 8    | D, D  | -8,192              | -9.8%                         |
| 9    | W, W  | -14,941             | -21.2%                        |
| 10   | W, W  | -12,506             | -14.9%                        |
| 11   | W, AN   | -10,166             | -8.6%                         |
| 12   | D, D  | -8,306              | -6.9%                         |
| 13   | W, W  | -10,094             | -12.3%                        |
| 14   | D, D  | -7,053              | -6.2%                         |
| 15   | C, C  | -6,951              | -6.8%                         |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -7,381              | -9.6%                         |
| 17             | C, C  | -7,380              | -12.3%                        |
| 18             | C, C  | -9,973              | -181.3%                       |
| 19             | C, C  | -9,637              | -81.0%                        |
| 20             | AN, W   | -9,873              | -50.6%                        |
| 21             | C, C  | -9,300              | -28.8%                        |
| 22             | W, W  | -12,404             | -207.5%                       |
| 23             | W, W  | -10,234             | -18.5%                        |
| 24             | W, W  | -8,265              | -11.5%                        |
| 25             | W, W  | -11,491             | -15.2%                        |
| 26             | W, AN   | -8,791              | -6.9%                         |
| 27             | AN, AN  | -8,364              | -8.1%                         |
| 28             | D, D  | -8,418              | -7.7%                         |
| 29             | D, D  | -9,795              | -9.9%                         |
| 30             | AN, BN  | -10,162             | -10.9%                        |
| 31             | BN, D   | -11,726             | -11.9%                        |
| 32             | AN, W   | -19,685             | -19.1%                        |
| 33             | W, W  | -14,239             | -12.2%                        |
| 34             | D, C  | -9,791              | -8.2%                         |
| 35             | C, C  | -10,510             | -12.0%                        |
| 36             | D, BN   | -9,648              | -11.5%                        |
| 37             | BN, AN  | -10,620             | -14.7%                        |
| 38             | W, W  | -11,617             | -10.3%                        |
| 39             | BN, D   | -9,234              | -6.6%                         |
| 40             | D, C  | -9,453              | -8.2%                         |
| 41             | C, C  | -23,664             | -49.8%                        |
| 42             | C, C  | -19,398             | -231.1%                       |
| <b>Average</b> |   | <b>-11,781</b>      | <b>-36.2%</b>                 |
| <b>Maximum</b> |   | <b>-6,951</b>       | <b>-6.2%</b>                  |
| <b>Minimum</b> |   | <b>-33,132</b>      | <b>-231.1%</b>                |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-200. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 11 (SR11) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -6,582              | -15.9%                        |
| 2    | W, W  | -2,982              | -6.4%                         |
| 3    | C, C  | -98                 | -0.5%                         |
| 4    | C, C  | -5,834              | -6.1%                         |
| 5    | AN, W   | -5,538              | -7.7%                         |
| 6    | BN, AN  | -2,280              | -7.3%                         |
| 7    | AN, W   | -1,042              | -13.9%                        |
| 8    | D, D  | 936                 | 4.7%                          |
| 9    | W, W  | -3,923              | -20.1%                        |
| 10   | W, W  | -5,322              | -16.8%                        |
| 11   | W, AN   | 3,776               | 3.9%                          |
| 12   | D, D  | -2,118              | -3.0%                         |
| 13   | W, W  | -4,423              | -8.4%                         |
| 14   | D, D  | -41                 | -0.1%                         |
| 15   | C, C  | -3,904              | -18.1%                        |
| 16   | D, C  | -1,953              | -3.4%                         |
| 17   | C, C  | -4,300              | -6.5%                         |
| 18   | C, C  | -2,780              | -3.4%                         |
| 19   | C, C  | -2,283              | -2.9%                         |
| 20   | AN, W   | -498                | -1.2%                         |
| 21   | C, C  | -6,093              | -13.2%                        |
| 22   | W, W  | -12,155             | -31.2%                        |
| 23   | W, W  | -8,891              | -85.9%                        |
| 24   | W, W  | -6,343              | -30.2%                        |
| 25   | W, W  | 5,556               | 12.4%                         |
| 26   | W, AN   | 1,955               | 1.9%                          |
| 27   | AN, AN  | -1,646              | -3.3%                         |
| 28   | D, D  | -1,149              | -2.4%                         |
| 29   | D, D  | -2,452              | -6.9%                         |
| 30   | AN, BN  | -1,739              | -5.1%                         |
| 31   | BN, D   | -3,612              | -9.9%                         |
| 32   | AN, W   | -6,148              | -12.2%                        |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 414                 | 0.6%                          |
| 34             | D, C  | -472                | -0.7%                         |
| 35             | C, C  | 7                   | 0.2%                          |
| 36             | D, BN   | -2,982              | -16.4%                        |
| 37             | BN, AN  | -4,776              | -64.8%                        |
| 38             | W, W  | -6,336              | -1391.1%                      |
| 39             | BN, D   | 1,457               | 1.7%                          |
| 40             | D, C  | -1,978              | -14.7%                        |
| 41             | C, C  | -3,282              | -5.3%                         |
| 42             | C, C  | -3,171              | -3.5%                         |
| <b>Average</b> |   | <b>-2,739</b>       | <b>-43.2%</b>                 |
| <b>Maximum</b> |   | <b>5,556</b>        | <b>12.4%</b>                  |
| <b>Minimum</b> |   | <b>-12,155</b>      | <b>-1391.1%</b>               |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-201. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 12 (SR12) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -3,765              | -4.3%                         |
| 2    | W, W  | -3,611              | -4.7%                         |
| 3    | C, C  | -3,588              | -3.5%                         |
| 4    | C, C  | -4,248              | -2.5%                         |
| 5    | AN, W   | -3,614              | -1.9%                         |
| 6    | BN, AN  | -2,920              | -1.7%                         |
| 7    | AN, W   | -2,965              | -2.2%                         |
| 8    | D, D  | -2,765              | -2.4%                         |
| 9    | W, W  | -3,365              | -3.5%                         |
| 10   | W, W  | -3,262              | -4.2%                         |
| 11   | W, AN   | -3,079              | -5.0%                         |
| 12   | D, D  | -2,874              | -3.9%                         |
| 13   | W, W  | -3,074              | -3.9%                         |
| 14   | D, D  | -2,751              | -2.9%                         |
| 15   | C, C  | -3,566              | -2.5%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -1,635              | -0.8%                         |
| 17             | C, C  | -4,096              | -1.9%                         |
| 18             | C, C  | -2,718              | -1.2%                         |
| 19             | C, C  | -1,995              | -0.9%                         |
| 20             | AN, W   | -6,385              | -3.2%                         |
| 21             | C, C  | -6,268              | -3.1%                         |
| 22             | W, W  | -2,586              | -1.5%                         |
| 23             | W, W  | -3,404              | -2.8%                         |
| 24             | W, W  | -3,379              | -2.9%                         |
| 25             | W, W  | -3,439              | -4.2%                         |
| 26             | W, AN   | -3,307              | -6.4%                         |
| 27             | AN, AN  | -3,219              | -3.9%                         |
| 28             | D, D  | -3,356              | -3.9%                         |
| 29             | D, D  | -3,646              | -3.7%                         |
| 30             | AN, BN  | -3,552              | -3.7%                         |
| 31             | BN, D   | -4,861              | -5.0%                         |
| 32             | AN, W   | -5,326              | -7.5%                         |
| 33             | W, W  | -4,712              | -8.2%                         |
| 34             | D, C  | -4,202              | -5.9%                         |
| 35             | C, C  | -3,258              | -2.5%                         |
| 36             | D, BN   | -5,365              | -3.6%                         |
| 37             | BN, AN  | -3,980              | -3.6%                         |
| 38             | W, W  | -4,431              | -4.4%                         |
| 39             | BN, D   | -3,423              | -5.8%                         |
| 40             | D, C  | -3,288              | -2.7%                         |
| 41             | C, C  | -4,042              | -2.1%                         |
| 42             | C, C  | -2,996              | -1.4%                         |
| <b>Average</b> |   | <b>-3,627</b>       | <b>-3.5%</b>                  |
| <b>Maximum</b> |   | <b>-1,635</b>       | <b>-0.8%</b>                  |
| <b>Minimum</b> |   | <b>-6,385</b>       | <b>-8.2%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-202. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 13 (SR13) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -6,661              | -1.2%                         |
| 2    | W, W  | -7,170              | -1.2%                         |
| 3    | C, C  | -7,118              | -1.1%                         |
| 4    | C, C  | -19,967             | -3.2%                         |
| 5    | AN, W   | -15,524             | -1.8%                         |
| 6    | BN, AN  | -10,101             | -1.5%                         |
| 7    | AN, W   | -9,050              | -1.3%                         |
| 8    | D, D  | -8,412              | -1.3%                         |
| 9    | W, W  | -8,557              | -1.3%                         |
| 10   | W, W  | -8,512              | -1.0%                         |
| 11   | W, AN   | -8,827              | -1.5%                         |
| 12   | D, D  | -8,917              | -1.5%                         |
| 13   | W, W  | -9,206              | -1.4%                         |
| 14   | D, D  | -9,243              | -1.6%                         |
| 15   | C, C  | -8,811              | -1.5%                         |
| 16   | D, C  | -8,820              | -1.4%                         |
| 17   | C, C  | -8,520              | -1.4%                         |
| 18   | C, C  | -9,143              | -1.3%                         |
| 19   | C, C  | -9,764              | -1.3%                         |
| 20   | AN, W   | -9,575              | -1.3%                         |
| 21   | C, C  | -9,164              | -1.3%                         |
| 22   | W, W  | -8,861              | -1.1%                         |
| 23   | W, W  | -9,601              | -1.3%                         |
| 24   | W, W  | -9,267              | -1.1%                         |
| 25   | W, W  | -9,551              | -1.3%                         |
| 26   | W, AN   | -9,566              | -1.7%                         |
| 27   | AN, AN  | -9,815              | -1.5%                         |
| 28   | D, D  | -9,972              | -1.6%                         |
| 29   | D, D  | -10,153             | -1.7%                         |
| 30   | AN, BN  | -10,793             | -1.8%                         |
| 31   | BN, D   | -10,389             | -1.7%                         |
| 32   | AN, W   | -10,741             | -1.7%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -11,998             | -1.8%                         |
| 34             | D, C  | -13,242             | -2.2%                         |
| 35             | C, C  | -11,432             | -1.8%                         |
| 36             | D, BN   | -11,207             | -1.8%                         |
| 37             | BN, AN  | -11,389             | -1.9%                         |
| 38             | W, W  | -11,589             | -1.6%                         |
| 39             | BN, D   | -11,690             | -1.8%                         |
| 40             | D, C  | -11,423             | -1.8%                         |
| 41             | C, C  | -19,033             | -2.8%                         |
| 42             | C, C  | -12,953             | -1.9%                         |
| <b>Average</b> |   | <b>-10,374</b>      | <b>-1.6%</b>                  |
| <b>Maximum</b> |   | <b>-6,661</b>       | <b>-1.0%</b>                  |
| <b>Minimum</b> |   | <b>-19,967</b>      | <b>-3.2%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-203. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 14 (SR14) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 161                 | 0.3%                          |
| 2    | W, W  | 967                 | 1.9%                          |
| 3    | C, C  | 737                 | 1.6%                          |
| 4    | C, C  | 615                 | 1.4%                          |
| 5    | AN, W   | 148                 | 0.1%                          |
| 6    | BN, AN  | 376                 | 0.7%                          |
| 7    | AN, W   | 39                  | 0.0%                          |
| 8    | D, D  | 838                 | 1.7%                          |
| 9    | W, W  | 92                  | 0.1%                          |
| 10   | W, W  | -34                 | 0.0%                          |
| 11   | W, AN   | -1,172              | -2.0%                         |
| 12   | D, D  | -2,524              | -5.3%                         |
| 13   | W, W  | -3,760              | -4.6%                         |
| 14   | D, D  | -4,752              | -10.4%                        |
| 15   | C, C  | -1,552              | -3.6%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 16                  | 0.0%                          |
| 17             | C, C  | 36                  | 0.1%                          |
| 18             | C, C  | 247                 | 0.5%                          |
| 19             | C, C  | 227                 | 0.5%                          |
| 20             | AN, W   | -117                | -0.1%                         |
| 21             | C, C  | 165                 | 0.4%                          |
| 22             | W, W  | 11                  | 0.0%                          |
| 23             | W, W  | -32                 | 0.0%                          |
| 24             | W, W  | 5                   | 0.0%                          |
| 25             | W, W  | -25                 | 0.0%                          |
| 26             | W, AN   | -32                 | -0.1%                         |
| 27             | AN, AN  | -52                 | -0.1%                         |
| 28             | D, D  | -28                 | -0.1%                         |
| 29             | D, D  | -8                  | 0.0%                          |
| 30             | AN, BN  | 49                  | 0.1%                          |
| 31             | BN, D   | 197                 | 0.4%                          |
| 32             | AN, W   | -84                 | -0.1%                         |
| 33             | W, W  | 108                 | 0.2%                          |
| 34             | D, C  | 15                  | 0.0%                          |
| 35             | C, C  | 102                 | 0.2%                          |
| 36             | D, BN   | 556                 | 1.2%                          |
| 37             | BN, AN  | 390                 | 0.7%                          |
| 38             | W, W  | 3                   | 0.0%                          |
| 39             | BN, D   | 41                  | 0.1%                          |
| 40             | D, C  | 277                 | 0.6%                          |
| 41             | C, C  | 768                 | 1.8%                          |
| 42             | C, C  | 614                 | 1.4%                          |
| <b>Average</b> |   | <b>-152</b>         | <b>-0.2%</b>                  |
| <b>Maximum</b> |   | <b>967</b>          | <b>1.9%</b>                   |
| <b>Minimum</b> |   | <b>-4,752</b>       | <b>-10.4%</b>                 |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-204. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 15 (SR15) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -29,101             | -5.8%                         |
| 2    | W, W  | -29,574             | -7.5%                         |
| 3    | C, C  | -26,941             | -6.0%                         |
| 4    | C, C  | -26,268             | -5.8%                         |
| 5    | AN, W   | -27,315             | -2.7%                         |
| 6    | BN, AN  | -26,994             | -5.7%                         |
| 7    | AN, W   | -35,903             | -4.4%                         |
| 8    | D, D  | -24,808             | -6.2%                         |
| 9    | W, W  | -35,575             | -5.3%                         |
| 10   | W, W  | -35,741             | -6.5%                         |
| 11   | W, AN   | -27,262             | -7.0%                         |
| 12   | D, D  | -24,092             | -5.9%                         |
| 13   | W, W  | -33,640             | -5.9%                         |
| 14   | D, D  | -30,020             | -7.4%                         |
| 15   | C, C  | -26,596             | -7.4%                         |
| 16   | D, C  | -26,522             | -6.6%                         |
| 17   | C, C  | -27,187             | -6.3%                         |
| 18   | C, C  | -26,836             | -5.6%                         |
| 19   | C, C  | -25,528             | -5.4%                         |
| 20   | AN, W   | -29,796             | -6.0%                         |
| 21   | C, C  | -26,804             | -5.2%                         |
| 22   | W, W  | -39,133             | -4.1%                         |
| 23   | W, W  | -38,270             | -5.6%                         |
| 24   | W, W  | -38,954             | -6.4%                         |
| 25   | W, W  | -34,954             | -6.7%                         |
| 26   | W, AN   | -31,858             | -9.0%                         |
| 27   | AN, AN  | -34,941             | -8.2%                         |
| 28   | D, D  | -35,314             | -8.5%                         |
| 29   | D, D  | -36,150             | -9.6%                         |
| 30   | AN, BN  | -34,605             | -8.6%                         |
| 31   | BN, D   | -39,070             | -9.7%                         |
| 32   | AN, W   | -45,987             | -7.3%                         |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -56,387             | -8.5%                         |
| 34             | D, C  | -38,136             | -9.0%                         |
| 35             | C, C  | -37,396             | -9.4%                         |
| 36             | D, BN   | -34,644             | -8.0%                         |
| 37             | BN, AN  | -38,266             | -5.0%                         |
| 38             | W, W  | -55,810             | -7.2%                         |
| 39             | BN, D   | -33,076             | -6.7%                         |
| 40             | D, C  | -31,157             | -7.6%                         |
| 41             | C, C  | -27,219             | -5.6%                         |
| 42             | C, C  | -33,139             | -6.9%                         |
| <b>Average</b> |   | <b>-33,261</b>      | <b>-6.7%</b>                  |
| <b>Maximum</b> |   | <b>-24,092</b>      | <b>-2.7%</b>                  |
| <b>Minimum</b> |   | <b>-56,387</b>      | <b>-9.7%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-205. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 16 (SR16) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -720                | -2.1%                         |
| 2    | W, W  | -780                | -2.7%                         |
| 3    | C, C  | -791                | -1.6%                         |
| 4    | C, C  | -663                | -0.9%                         |
| 5    | AN, W   | -844                | -1.2%                         |
| 6    | BN, AN  | -903                | -2.2%                         |
| 7    | AN, W   | -863                | -2.3%                         |
| 8    | D, D  | -1,061              | -2.6%                         |
| 9    | W, W  | -990                | -2.7%                         |
| 10   | W, W  | -1,152              | -3.8%                         |
| 11   | W, AN   | -1,256              | -7.6%                         |
| 12   | D, D  | -1,401              | -5.2%                         |
| 13   | W, W  | -1,687              | -6.3%                         |
| 14   | D, D  | -1,755              | -6.5%                         |
| 15   | C, C  | -1,881              | -4.5%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -1,930              | -3.5%                         |
| 17             | C, C  | -1,829              | -2.9%                         |
| 18             | C, C  | -1,779              | -2.5%                         |
| 19             | C, C  | -1,768              | -2.4%                         |
| 20             | AN, W   | -1,787              | -3.1%                         |
| 21             | C, C  | -1,794              | -3.2%                         |
| 22             | W, W  | -1,676              | -3.4%                         |
| 23             | W, W  | -1,703              | -4.0%                         |
| 24             | W, W  | -1,736              | -5.0%                         |
| 25             | W, W  | -1,815              | -5.7%                         |
| 26             | W, AN   | -1,945              | -7.9%                         |
| 27             | AN, AN  | -1,988              | -7.2%                         |
| 28             | D, D  | -2,105              | -5.1%                         |
| 29             | D, D  | -2,290              | -4.4%                         |
| 30             | AN, BN  | -2,487              | -4.3%                         |
| 31             | BN, D   | -2,405              | -4.4%                         |
| 32             | AN, W   | -2,326              | -5.6%                         |
| 33             | W, W  | -2,463              | -8.7%                         |
| 34             | D, C  | -2,602              | -5.5%                         |
| 35             | C, C  | -2,634              | -4.4%                         |
| 36             | D, BN   | -2,598              | -4.2%                         |
| 37             | BN, AN  | -2,620              | -4.7%                         |
| 38             | W, W  | -2,590              | -7.8%                         |
| 39             | BN, D   | -2,689              | -5.7%                         |
| 40             | D, C  | -2,546              | -3.3%                         |
| 41             | C, C  | -2,407              | -2.5%                         |
| 42             | C, C  | -775                | -0.8%                         |
| <b>Average</b> |   | <b>-1,763</b>       | <b>-4.1%</b>                  |
| <b>Maximum</b> |   | <b>-663</b>         | <b>-0.8%</b>                  |
| <b>Minimum</b> |   | <b>-2,689</b>       | <b>-8.7%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-206. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 17 (SR17) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -992                | -4.9%                         |
| 2    | W, W  | -997                | -2.1%                         |
| 3    | C, C  | -858                | -0.8%                         |
| 4    | C, C  | -125                | -0.1%                         |
| 5    | AN, W   | -1,218              | -1.2%                         |
| 6    | BN, AN  | -1,242              | -16.7%                        |
| 7    | AN, W   | -1,266              | -3.7%                         |
| 8    | D, D  | -1,126              | -9.7%                         |
| 9    | W, W  | -1,153              | -4.5%                         |
| 10   | W, W  | -1,614              | -3.3%                         |
| 11   | W, AN   | -1,608              | -1.6%                         |
| 12   | D, D  | -1,668              | -20.9%                        |
| 13   | W, W  | -1,976              | -14.6%                        |
| 14   | D, D  | -1,991              | -30.9%                        |
| 15   | C, C  | -882                | -1.6%                         |
| 16   | D, C  | -210                | -0.3%                         |
| 17   | C, C  | -67                 | -0.1%                         |
| 18   | C, C  | -156                | -0.2%                         |
| 19   | C, C  | -39                 | -0.1%                         |
| 20   | AN, W   | -1,715              | -1.4%                         |
| 21   | C, C  | -1,741              | -1.3%                         |
| 22   | W, W  | -1,991              | -2.8%                         |
| 23   | W, W  | -2,435              | -7.0%                         |
| 24   | W, W  | -2,253              | -14.9%                        |
| 25   | W, W  | -2,212              | -97.1%                        |
| 26   | W, AN   | -2,231              | -11.8%                        |
| 27   | AN, AN  | -2,300              | -13.3%                        |
| 28   | D, D  | -2,170              | -3.8%                         |
| 29   | D, D  | -1,441              | -2.1%                         |
| 30   | AN, BN  | -1,739              | -2.2%                         |
| 31   | BN, D   | -1,369              | -1.4%                         |
| 32   | AN, W   | -2,995              | -4.1%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -3,833              | -13.0%                        |
| 34             | D, C  | -3,716              | -5.8%                         |
| 35             | C, C  | -2,155              | -2.6%                         |
| 36             | D, BN   | -2,013              | -2.2%                         |
| 37             | BN, AN  | -3,536              | -2.6%                         |
| 38             | W, W  | -5,123              | -7.0%                         |
| 39             | BN, D   | -3,766              | -7.3%                         |
| 40             | D, C  | -1,882              | -1.6%                         |
| 41             | C, C  | -1,613              | -1.2%                         |
| 42             | C, C  | -37                 | -0.1%                         |
| <b>Average</b> |   | <b>-1,749</b>       | <b>-7.7%</b>                  |
| <b>Maximum</b> |   | <b>-37</b>          | <b>-0.1%</b>                  |
| <b>Minimum</b> |   | <b>-5,123</b>       | <b>-97.1%</b>                 |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.

Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-207. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 18 (SR18) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -39,928             | -71.4%                        |
| 2    | W, W  | -42,945             | -59.9%                        |
| 3    | C, C  | -23,602             | -72.2%                        |
| 4    | C, C  | -8,411              | -20.4%                        |
| 5    | AN, W   | -15,405             | -11.9%                        |
| 6    | BN, AN  | -52,583             | -25.5%                        |
| 7    | AN, W   | -41,206             | -17.2%                        |
| 8    | D, D  | -40,376             | -14.0%                        |
| 9    | W, W  | -42,654             | -14.3%                        |
| 10   | W, W  | -53,047             | -5.0%                         |
| 11   | W, AN   | -47,304             | -4.0%                         |
| 12   | D, D  | -48,337             | -6.9%                         |
| 13   | W, W  | -50,349             | -6.5%                         |
| 14   | D, D  | -47,967             | -6.9%                         |
| 15   | C, C  | -42,381             | -11.1%                        |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -41,651             | -26.1%                        |
| 17             | C, C  | -30,640             | -518.9%                       |
| 18             | C, C  | -23,352             | -43.2%                        |
| 19             | C, C  | -10,803             | -14.7%                        |
| 20             | AN, W   | -12,651             | -12.1%                        |
| 21             | C, C  | -11,361             | -132.0%                       |
| 22             | W, W  | -40,457             | -135.4%                       |
| 23             | W, W  | -52,756             | -17.5%                        |
| 24             | W, W  | -56,844             | -25.3%                        |
| 25             | W, W  | -58,961             | -11.7%                        |
| 26             | W, AN   | -56,636             | -7.1%                         |
| 27             | AN, AN  | -53,081             | -9.5%                         |
| 28             | D, D  | -52,751             | -12.0%                        |
| 29             | D, D  | -55,281             | -26.3%                        |
| 30             | AN, BN  | -58,191             | -78.3%                        |
| 31             | BN, D   | -53,295             | -149.8%                       |
| 32             | AN, W   | -58,788             | -84.9%                        |
| 33             | W, W  | -71,253             | -38.3%                        |
| 34             | D, C  | -59,862             | -37.8%                        |
| 35             | C, C  | -43,609             | -86.4%                        |
| 36             | D, BN   | -17,417             | -22.5%                        |
| 37             | BN, AN  | -17,126             | -20.4%                        |
| 38             | W, W  | -89,157             | -38.1%                        |
| 39             | BN, D   | -69,359             | -26.1%                        |
| 40             | D, C  | -54,877             | -157.7%                       |
| 41             | C, C  | -13,375             | -21.5%                        |
| 42             | C, C  | -7,904              | -8.3%                         |
| <b>Average</b> |   | <b>-42,094</b>      | <b>-50.2%</b>                 |
| <b>Maximum</b> |   | <b>-7,904</b>       | <b>-4.0%</b>                  |
| <b>Minimum</b> |   | <b>-89,157</b>      | <b>-518.9%</b>                |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-208. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 19 (SR19) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -1                  | 0.0%                          |
| 2    | W, W  | 0                   | 0.0%                          |
| 3    | C, C  | 0                   | 0.0%                          |
| 4    | C, C  | 0                   | 0.0%                          |
| 5    | AN, W   | -1                  | 0.0%                          |
| 6    | BN, AN  | -1                  | 0.0%                          |
| 7    | AN, W   | -2                  | 0.0%                          |
| 8    | D, D  | -1                  | 0.0%                          |
| 9    | W, W  | -1                  | 0.0%                          |
| 10   | W, W  | -4                  | 0.0%                          |
| 11   | W, AN   | -3                  | 0.0%                          |
| 12   | D, D  | -1                  | -0.1%                         |
| 13   | W, W  | -5                  | -0.1%                         |
| 14   | D, D  | -2                  | -0.1%                         |
| 15   | C, C  | 0                   | 0.0%                          |
| 16   | D, C  | 0                   | 0.0%                          |
| 17   | C, C  | 0                   | 0.0%                          |
| 18   | C, C  | 0                   | 0.0%                          |
| 19   | C, C  | 0                   | 0.0%                          |
| 20   | AN, W   | 0                   | 0.0%                          |
| 21   | C, C  | 0                   | 0.0%                          |
| 22   | W, W  | -6                  | -0.1%                         |
| 23   | W, W  | -5                  | -0.8%                         |
| 24   | W, W  | -5                  | -0.1%                         |
| 25   | W, W  | -9                  | 0.0%                          |
| 26   | W, AN   | -11                 | -0.1%                         |
| 27   | AN, AN  | -6                  | -2.6%                         |
| 28   | D, D  | -2                  | -0.2%                         |
| 29   | D, D  | 0                   | 0.0%                          |
| 30   | AN, BN  | 0                   | 0.0%                          |
| 31   | BN, D   | 0                   | 0.0%                          |
| 32   | AN, W   | -7                  | -0.3%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -8                  | -0.1%                         |
| 34             | D, C  | -3                  | 0.0%                          |
| 35             | C, C  | 0                   | 0.0%                          |
| 36             | D, BN   | 0                   | 0.0%                          |
| 37             | BN, AN  | 0                   | 0.0%                          |
| 38             | W, W  | -7                  | -0.3%                         |
| 39             | BN, D   | -3                  | -0.6%                         |
| 40             | D, C  | 0                   | 0.0%                          |
| 41             | C, C  | 0                   | 0.2%                          |
| 42             | C, C  | 0                   | 0.0%                          |
| <b>Average</b> |   | <b>-2</b>           | <b>-0.1%</b>                  |
| <b>Maximum</b> |   | <b>0</b>            | <b>0.2%</b>                   |
| <b>Minimum</b> |   | <b>-11</b>          | <b>-2.6%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-209. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 20 (SR20) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -1                  | 0.0%                          |
| 2    | W, W  | -1                  | 0.0%                          |
| 3    | C, C  | -1                  | 0.0%                          |
| 4    | C, C  | -1                  | 0.0%                          |
| 5    | AN, W   | -1                  | 0.0%                          |
| 6    | BN, AN  | -1                  | 0.0%                          |
| 7    | AN, W   | -1                  | 0.0%                          |
| 8    | D, D  | -1                  | 0.0%                          |
| 9    | W, W  | -1                  | 0.0%                          |
| 10   | W, W  | -2                  | 0.0%                          |
| 11   | W, AN   | -2                  | 0.0%                          |
| 12   | D, D  | -2                  | 0.0%                          |
| 13   | W, W  | -2                  | 0.0%                          |
| 14   | D, D  | -2                  | 0.0%                          |
| 15   | C, C  | -2                  | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -2                  | 0.0%                          |
| 17             | C, C  | -2                  | 0.0%                          |
| 18             | C, C  | -2                  | 0.0%                          |
| 19             | C, C  | -2                  | 0.0%                          |
| 20             | AN, W   | -2                  | 0.0%                          |
| 21             | C, C  | -2                  | 0.0%                          |
| 22             | W, W  | -2                  | 0.0%                          |
| 23             | W, W  | -2                  | 0.0%                          |
| 24             | W, W  | -3                  | 0.0%                          |
| 25             | W, W  | -3                  | 0.0%                          |
| 26             | W, AN   | -3                  | 0.0%                          |
| 27             | AN, AN  | -3                  | 0.0%                          |
| 28             | D, D  | -3                  | 0.0%                          |
| 29             | D, D  | -3                  | 0.0%                          |
| 30             | AN, BN  | -4                  | 0.0%                          |
| 31             | BN, D   | -4                  | 0.0%                          |
| 32             | AN, W   | -4                  | 0.0%                          |
| 33             | W, W  | -4                  | 0.0%                          |
| 34             | D, C  | -4                  | 0.0%                          |
| 35             | C, C  | -4                  | 0.0%                          |
| 36             | D, BN   | -4                  | 0.0%                          |
| 37             | BN, AN  | -5                  | 0.0%                          |
| 38             | W, W  | -6                  | 0.0%                          |
| 39             | BN, D   | -5                  | 0.0%                          |
| 40             | D, C  | -5                  | 0.0%                          |
| 41             | C, C  | -6                  | 0.0%                          |
| 42             | C, C  | -6                  | 0.0%                          |
| <b>Average</b> |   | <b>-3</b>           | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>-1</b>           | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-6</b>           | <b>0.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-210. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 21 (SR21) for Alternative 1 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 0                   | 0.0%                          |
| 2    | W, W  | 0                   | 0.0%                          |
| 3    | C, C  | 0                   | 0.0%                          |
| 4    | C, C  | 0                   | 0.0%                          |
| 5    | AN, W   | 0                   | 0.0%                          |
| 6    | BN, AN  | 0                   | 0.0%                          |
| 7    | AN, W   | -2                  | 0.0%                          |
| 8    | D, D  | 0                   | 0.0%                          |
| 9    | W, W  | 0                   | 0.0%                          |
| 10   | W, W  | -18                 | 0.0%                          |
| 11   | W, AN   | -8                  | 0.0%                          |
| 12   | D, D  | 0                   | 0.0%                          |
| 13   | W, W  | -7                  | 0.0%                          |
| 14   | D, D  | -1                  | 0.0%                          |
| 15   | C, C  | 0                   | 0.0%                          |
| 16   | D, C  | 1                   | 0.0%                          |
| 17   | C, C  | 0                   | 0.0%                          |
| 18   | C, C  | 1                   | 0.0%                          |
| 19   | C, C  | 1                   | 0.0%                          |
| 20   | AN, W   | 1                   | 0.0%                          |
| 21   | C, C  | 1                   | 0.0%                          |
| 22   | W, W  | -1                  | 0.0%                          |
| 23   | W, W  | -6                  | 0.0%                          |
| 24   | W, W  | -7                  | 0.0%                          |
| 25   | W, W  | -24                 | 0.0%                          |
| 26   | W, AN   | -18                 | 0.0%                          |
| 27   | AN, AN  | -5                  | 0.0%                          |
| 28   | D, D  | -2                  | 0.0%                          |
| 29   | D, D  | 0                   | 0.0%                          |
| 30   | AN, BN  | 2                   | 0.0%                          |
| 31   | BN, D   | 1                   | 0.0%                          |
| 32   | AN, W   | -5                  | 0.0%                          |
| 33   | W, W  | -25                 | 0.0%                          |
| 34   | D, C  | -7                  | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt1 minus NAA (AF) | Alt1 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 35             | C, C  | -1                  | 0.0%                          |
| 36             | D, BN   | 1                   | 0.0%                          |
| 37             | BN, AN  | 1                   | 0.0%                          |
| 38             | W, W  | -4                  | 0.0%                          |
| 39             | BN, D   | -8                  | 0.0%                          |
| 40             | D, C  | 1                   | 0.0%                          |
| 41             | C, C  | 0                   | 0.0%                          |
| 42             | C, C  | 0                   | 0.0%                          |
| <b>Average</b> |   | <b>-3</b>           | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>2</b>            | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-25</b>          | <b>0.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

### I-1.2.3 Changes in Groundwater-Surface Water Interaction Flow, Alternative 2 with TUCP Without VA Compared to No Action Alternative

Table I.1-211 through Table I.1-231 provide the annual simulated groundwater-surface water interaction flow through the model simulation period for each of the 21 model subregions for Alternative 2 with TUCP without VA compared to the No Action Alternative.

Table I.1-211. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 1 (SR1) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 1,532                      | 0.5%                                 |
| 2    | W, W  | -378                       | -0.1%                                |
| 3    | C, C  | -741                       | -0.3%                                |
| 4    | C, C  | 10,861                     | 4.2%                                 |
| 5    | AN, W   | 11,552                     | 5.1%                                 |
| 6    | BN, AN  | 4,151                      | 1.6%                                 |
| 7    | AN, W   | -651                       | -0.3%                                |
| 8    | D, D  | 701                        | 0.3%                                 |
| 9    | W, W  | 1,223                      | 0.5%                                 |
| 10   | W, W  | -1,187                     | -0.4%                                |
| 11   | W, AN   | -1,972                     | -0.6%                                |
| 12   | D, D  | 1,423                      | 0.5%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 13             | W, W  | 563                        | 0.2%                                 |
| 14             | D, D  | 1,079                      | 0.4%                                 |
| 15             | C, C  | -1,703                     | -0.6%                                |
| 16             | D, C  | 3,894                      | 1.6%                                 |
| 17             | C, C  | -260                       | -0.1%                                |
| 18             | C, C  | 11,585                     | 5.7%                                 |
| 19             | C, C  | 17,564                     | 9.1%                                 |
| 20             | AN, W   | 2,057                      | 1.1%                                 |
| 21             | C, C  | 1,278                      | 0.6%                                 |
| 22             | W, W  | 2,142                      | 1.0%                                 |
| 23             | W, W  | 566                        | 0.2%                                 |
| 24             | W, W  | 2,941                      | 1.1%                                 |
| 25             | W, W  | 535                        | 0.2%                                 |
| 26             | W, AN   | -1,342                     | -0.4%                                |
| 27             | AN, AN  | 2,088                      | 0.7%                                 |
| 28             | D, D  | 2,237                      | 0.8%                                 |
| 29             | D, D  | 345                        | 0.1%                                 |
| 30             | AN, BN  | 65                         | 0.0%                                 |
| 31             | BN, D   | 60                         | 0.0%                                 |
| 32             | AN, W   | 756                        | 0.3%                                 |
| 33             | W, W  | 1,743                      | 0.6%                                 |
| 34             | D, C  | -1,674                     | -0.5%                                |
| 35             | C, C  | 376                        | 0.1%                                 |
| 36             | D, BN   | 1,333                      | 0.5%                                 |
| 37             | BN, AN  | 790                        | 0.3%                                 |
| 38             | W, W  | 1,127                      | 0.4%                                 |
| 39             | BN, D   | -148                       | -0.1%                                |
| 40             | D, C  | 1,633                      | 0.6%                                 |
| 41             | C, C  | 10,494                     | 4.4%                                 |
| 42             | C, C  | 13,046                     | 6.1%                                 |
| <b>Average</b> |   | <b>2,421</b>               | <b>1.1%</b>                          |
| <b>Maximum</b> |   | <b>17,564</b>              | <b>9.1%</b>                          |
| <b>Minimum</b> |   | <b>-1,972</b>              | <b>-0.6%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-212. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 2 (SR2) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 2,927                      | 3.1%                                 |
| 2    | W, W  | -272                       | -0.6%                                |
| 3    | C, C  | -37                        | -0.3%                                |
| 4    | C, C  | -1,571                     | -12.8%                               |
| 5    | AN, W   | 5,661                      | 1.5%                                 |
| 6    | BN, AN  | 8,204                      | 6.0%                                 |
| 7    | AN, W   | 862                        | 0.5%                                 |
| 8    | D, D  | 2,583                      | 2.1%                                 |
| 9    | W, W  | 2,373                      | 1.7%                                 |
| 10   | W, W  | -1,009                     | -6.4%                                |
| 11   | W, AN   | -3,042                     | -9.8%                                |
| 12   | D, D  | 3,044                      | 10.0%                                |
| 13   | W, W  | 3,319                      | 5.1%                                 |
| 14   | D, D  | 3,194                      | 4.7%                                 |
| 15   | C, C  | 1,328                      | 0.9%                                 |
| 16   | D, C  | 12,906                     | 6.5%                                 |
| 17   | C, C  | 3,618                      | 3.2%                                 |
| 18   | C, C  | 3,650                      | 2.2%                                 |
| 19   | C, C  | 13,210                     | 5.2%                                 |
| 20   | AN, W   | 4,118                      | 1.2%                                 |
| 21   | C, C  | 4,178                      | 4.7%                                 |
| 22   | W, W  | 13,071                     | 4.8%                                 |
| 23   | W, W  | 5,989                      | 3.9%                                 |
| 24   | W, W  | 7,193                      | 9.0%                                 |
| 25   | W, W  | 1,926                      | 2.3%                                 |
| 26   | W, AN   | -2,567                     | -79.9%                               |
| 27   | AN, AN  | 4,229                      | 9.0%                                 |
| 28   | D, D  | 4,937                      | 14.5%                                |
| 29   | D, D  | 2,632                      | 2.3%                                 |
| 30   | AN, BN  | 793                        | 0.5%                                 |
| 31   | BN, D   | 337                        | 0.4%                                 |
| 32   | AN, W   | 1,401                      | 1.8%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | 2,897                      | 7.8%                                 |
| 34             | D, C  | -2,231                     | -9.7%                                |
| 35             | C, C  | 1,537                      | 1.7%                                 |
| 36             | D, BN   | 5,622                      | 4.4%                                 |
| 37             | BN, AN  | 3,203                      | 1.7%                                 |
| 38             | W, W  | 4,401                      | 2.7%                                 |
| 39             | BN, D   | 457                        | 0.7%                                 |
| 40             | D, C  | 2,943                      | 2.3%                                 |
| 41             | C, C  | -3,131                     | -2.8%                                |
| 42             | C, C  | 10,700                     | 4.9%                                 |
| <b>Average</b> |   | <b>3,228</b>               | <b>0.3%</b>                          |
| <b>Maximum</b> |   | <b>13,210</b>              | <b>14.5%</b>                         |
| <b>Minimum</b> |   | <b>-3,131</b>              | <b>-79.9%</b>                        |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-213. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 3 (SR3) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 773                        | 0.8%                                 |
| 2    | W, W  | 772                        | 0.8%                                 |
| 3    | C, C  | 1,341                      | 1.6%                                 |
| 4    | C, C  | 13,295                     | 20.2%                                |
| 5    | AN, W   | 14,362                     | 29.4%                                |
| 6    | BN, AN  | 5,305                      | 7.6%                                 |
| 7    | AN, W   | 3,689                      | 5.0%                                 |
| 8    | D, D  | 3,016                      | 3.9%                                 |
| 9    | W, W  | 2,344                      | 2.7%                                 |
| 10   | W, W  | 2,214                      | 2.1%                                 |
| 11   | W, AN   | 1,970                      | 1.8%                                 |
| 12   | D, D  | 2,156                      | 2.3%                                 |
| 13   | W, W  | 2,651                      | 3.1%                                 |
| 14   | D, D  | 2,753                      | 3.2%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 15             | C, C  | 4,184                      | 5.3%                                 |
| 16             | D, C  | 5,712                      | 8.2%                                 |
| 17             | C, C  | 4,393                      | 6.4%                                 |
| 18             | C, C  | 15,872                     | 31.9%                                |
| 19             | C, C  | 17,388                     | 43.8%                                |
| 20             | AN, W   | 6,691                      | 15.0%                                |
| 21             | C, C  | 6,336                      | 9.6%                                 |
| 22             | W, W  | 8,955                      | 15.5%                                |
| 23             | W, W  | 6,404                      | 8.3%                                 |
| 24             | W, W  | 5,388                      | 6.2%                                 |
| 25             | W, W  | 4,657                      | 5.3%                                 |
| 26             | W, AN   | 4,225                      | 4.1%                                 |
| 27             | AN, AN  | 4,098                      | 4.5%                                 |
| 28             | D, D  | 3,886                      | 4.4%                                 |
| 29             | D, D  | 4,050                      | 4.8%                                 |
| 30             | AN, BN  | 3,239                      | 3.7%                                 |
| 31             | BN, D   | 2,761                      | 3.0%                                 |
| 32             | AN, W   | 2,334                      | 2.5%                                 |
| 33             | W, W  | 2,072                      | 2.1%                                 |
| 34             | D, C  | 1,942                      | 2.0%                                 |
| 35             | C, C  | 2,795                      | 3.2%                                 |
| 36             | D, BN   | 4,515                      | 5.9%                                 |
| 37             | BN, AN  | 3,213                      | 4.4%                                 |
| 38             | W, W  | 2,790                      | 3.1%                                 |
| 39             | BN, D   | 2,477                      | 2.8%                                 |
| 40             | D, C  | 2,855                      | 3.4%                                 |
| 41             | C, C  | 17,436                     | 24.7%                                |
| 42             | C, C  | 17,037                     | 35.2%                                |
| <b>Average</b> |   | <b>5,341</b>               | <b>8.4%</b>                          |
| <b>Maximum</b> |   | <b>17,436</b>              | <b>43.8%</b>                         |
| <b>Minimum</b> |   | <b>772</b>                 | <b>0.8%</b>                          |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-214. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 4 (SR4) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 6,332                      | 1.5%                                 |
| 2    | W, W  | 175                        | 0.0%                                 |
| 3    | C, C  | -293                       | -0.1%                                |
| 4    | C, C  | 32,426                     | 11.2%                                |
| 5    | AN, W   | 37,042                     | 12.0%                                |
| 6    | BN, AN  | 21,267                     | 5.5%                                 |
| 7    | AN, W   | 1,836                      | 0.4%                                 |
| 8    | D, D  | 3,250                      | 0.9%                                 |
| 9    | W, W  | 9,822                      | 2.2%                                 |
| 10   | W, W  | 4,744                      | 1.0%                                 |
| 11   | W, AN   | -3,115                     | -0.7%                                |
| 12   | D, D  | 8,206                      | 2.1%                                 |
| 13   | W, W  | 5,937                      | 1.3%                                 |
| 14   | D, D  | 6,537                      | 1.9%                                 |
| 15   | C, C  | 343                        | 0.1%                                 |
| 16   | D, C  | 16,555                     | 5.0%                                 |
| 17   | C, C  | 1,082                      | 0.3%                                 |
| 18   | C, C  | 36,854                     | 11.6%                                |
| 19   | C, C  | 57,618                     | 20.0%                                |
| 20   | AN, W   | 13,198                     | 3.7%                                 |
| 21   | C, C  | 12,426                     | 3.7%                                 |
| 22   | W, W  | 17,345                     | 4.5%                                 |
| 23   | W, W  | 8,523                      | 2.3%                                 |
| 24   | W, W  | 14,432                     | 3.7%                                 |
| 25   | W, W  | 7,312                      | 1.8%                                 |
| 26   | W, AN   | -1,238                     | -0.3%                                |
| 27   | AN, AN  | 14,110                     | 3.6%                                 |
| 28   | D, D  | 13,841                     | 3.5%                                 |
| 29   | D, D  | 4,499                      | 1.1%                                 |
| 30   | AN, BN  | 3,809                      | 1.0%                                 |
| 31   | BN, D   | 1,858                      | 0.5%                                 |
| 32   | AN, W   | 6,840                      | 1.6%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | 7,683                      | 1.8%                                 |
| 34             | D, C  | -1,458                     | -0.4%                                |
| 35             | C, C  | 4,478                      | 1.1%                                 |
| 36             | D, BN   | 7,814                      | 2.1%                                 |
| 37             | BN, AN  | 6,456                      | 1.7%                                 |
| 38             | W, W  | 7,262                      | 1.8%                                 |
| 39             | BN, D   | 886                        | 0.2%                                 |
| 40             | D, C  | 7,621                      | 2.0%                                 |
| 41             | C, C  | 31,110                     | 9.1%                                 |
| 42             | C, C  | 56,503                     | 18.6%                                |
| <b>Average</b> |   | <b>11,713</b>              | <b>3.5%</b>                          |
| <b>Maximum</b> |   | <b>57,618</b>              | <b>20.0%</b>                         |
| <b>Minimum</b> |   | <b>-3,115</b>              | <b>-0.7%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-215. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 5 (SR5) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | -1,108                     | -0.3%                                |
| 2    | W, W  | -736                       | -0.2%                                |
| 3    | C, C  | 856                        | 0.2%                                 |
| 4    | C, C  | -576                       | -0.2%                                |
| 5    | AN, W   | 3,884                      | 2.4%                                 |
| 6    | BN, AN  | -4,470                     | -1.4%                                |
| 7    | AN, W   | 3,898                      | 1.0%                                 |
| 8    | D, D  | -5,317                     | -1.5%                                |
| 9    | W, W  | 4,379                      | 1.0%                                 |
| 10   | W, W  | 3,350                      | 0.6%                                 |
| 11   | W, AN   | -1,936                     | -0.4%                                |
| 12   | D, D  | -2,327                     | -0.5%                                |
| 13   | W, W  | 7,897                      | 1.9%                                 |
| 14   | D, D  | -2,253                     | -0.6%                                |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 15             | C, C  | 2,931                      | 0.9%                                 |
| 16             | D, C  | 893                        | 0.3%                                 |
| 17             | C, C  | -1,172                     | -0.4%                                |
| 18             | C, C  | 820                        | 0.3%                                 |
| 19             | C, C  | 3,450                      | 1.5%                                 |
| 20             | AN, W   | 8,360                      | 3.1%                                 |
| 21             | C, C  | 552                        | 0.2%                                 |
| 22             | W, W  | 6,040                      | 1.8%                                 |
| 23             | W, W  | 2,449                      | 0.6%                                 |
| 24             | W, W  | -607                       | -0.1%                                |
| 25             | W, W  | -81                        | 0.0%                                 |
| 26             | W, AN   | 424                        | 0.1%                                 |
| 27             | AN, AN  | -743                       | -0.2%                                |
| 28             | D, D  | -3,994                     | -1.0%                                |
| 29             | D, D  | 8,153                      | 2.2%                                 |
| 30             | AN, BN  | -834                       | -0.2%                                |
| 31             | BN, D   | 527                        | 0.1%                                 |
| 32             | AN, W   | 3,577                      | 0.8%                                 |
| 33             | W, W  | -2,892                     | -0.6%                                |
| 34             | D, C  | 11,209                     | 2.6%                                 |
| 35             | C, C  | -2,458                     | -0.6%                                |
| 36             | D, BN   | 5,030                      | 1.6%                                 |
| 37             | BN, AN  | 5,085                      | 1.6%                                 |
| 38             | W, W  | -2,667                     | -0.6%                                |
| 39             | BN, D   | -565                       | -0.2%                                |
| 40             | D, C  | 1,618                      | 0.4%                                 |
| 41             | C, C  | 6,666                      | 2.4%                                 |
| 42             | C, C  | 15,305                     | 7.2%                                 |
| <b>Average</b> |   | <b>1,729</b>               | <b>0.6%</b>                          |
| <b>Maximum</b> |   | <b>15,305</b>              | <b>7.2%</b>                          |
| <b>Minimum</b> |   | <b>-5,317</b>              | <b>-1.5%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-216. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 6 (SR6) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 892                        | 1.6%                                 |
| 2    | W, W  | 234                        | 0.3%                                 |
| 3    | C, C  | -90                        | -0.1%                                |
| 4    | C, C  | -3,719                     | -2.7%                                |
| 5    | AN, W   | -727                       | -0.3%                                |
| 6    | BN, AN  | -81                        | -0.1%                                |
| 7    | AN, W   | 1,420                      | 1.3%                                 |
| 8    | D, D  | -1,606                     | -1.1%                                |
| 9    | W, W  | 2,408                      | 4.0%                                 |
| 10   | W, W  | 401                        | 1.9%                                 |
| 11   | W, AN   | -1,177                     | -4.1%                                |
| 12   | D, D  | 1,300                      | 1.9%                                 |
| 13   | W, W  | 2,097                      | 4.6%                                 |
| 14   | D, D  | 62                         | 0.1%                                 |
| 15   | C, C  | -497                       | -0.4%                                |
| 16   | D, C  | 2,682                      | 1.8%                                 |
| 17   | C, C  | -2,316                     | -1.9%                                |
| 18   | C, C  | -7,244                     | -4.1%                                |
| 19   | C, C  | 377                        | 0.2%                                 |
| 20   | AN, W   | -2,690                     | -1.1%                                |
| 21   | C, C  | -770                       | -0.5%                                |
| 22   | W, W  | 2,217                      | 1.1%                                 |
| 23   | W, W  | -45                        | 0.0%                                 |
| 24   | W, W  | 727                        | 0.7%                                 |
| 25   | W, W  | 50                         | 0.1%                                 |
| 26   | W, AN   | -720                       | -1.2%                                |
| 27   | AN, AN  | 760                        | 0.9%                                 |
| 28   | D, D  | 869                        | 0.9%                                 |
| 29   | D, D  | 966                        | 0.9%                                 |
| 30   | AN, BN  | 272                        | 0.3%                                 |
| 31   | BN, D   | 153                        | 0.2%                                 |
| 32   | AN, W   | 1,134                      | 1.7%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | 240                        | 0.6%                                 |
| 34             | D, C  | 390                        | 0.4%                                 |
| 35             | C, C  | -835                       | -0.9%                                |
| 36             | D, BN   | 1,246                      | 1.0%                                 |
| 37             | BN, AN  | 1,732                      | 1.2%                                 |
| 38             | W, W  | 125                        | 0.2%                                 |
| 39             | BN, D   | -452                       | -0.4%                                |
| 40             | D, C  | 578                        | 0.4%                                 |
| 41             | C, C  | -4,997                     | -3.6%                                |
| 42             | C, C  | 1,581                      | 0.7%                                 |
| <b>Average</b> |   | <b>-73</b>                 | <b>0.2%</b>                          |
| <b>Maximum</b> |   | <b>2,682</b>               | <b>4.6%</b>                          |
| <b>Minimum</b> |   | <b>-7,244</b>              | <b>-4.1%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-217. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 7 (SR7) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | -845                       | -5.8%                                |
| 2    | W, W  | 11                         | 0.0%                                 |
| 3    | C, C  | 250                        | 1.4%                                 |
| 4    | C, C  | -6,244                     | -20.1%                               |
| 5    | AN, W   | 811                        | 1.8%                                 |
| 6    | BN, AN  | -2,110                     | -85.7%                               |
| 7    | AN, W   | -122                       | -1.5%                                |
| 8    | D, D  | 736                        | 10.3%                                |
| 9    | W, W  | 90                         | 2.1%                                 |
| 10   | W, W  | 251                        | 0.6%                                 |
| 11   | W, AN   | -351                       | -1.1%                                |
| 12   | D, D  | -469                       | -1.5%                                |
| 13   | W, W  | 979                        | 2.8%                                 |
| 14   | D, D  | 260                        | 2.2%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 15             | C, C  | -1,244                     | -118.4%                              |
| 16             | D, C  | 1,618                      | 8.9%                                 |
| 17             | C, C  | -1,612                     | -78.8%                               |
| 18             | C, C  | -6,384                     | -28.2%                               |
| 19             | C, C  | 1,607                      | 6.1%                                 |
| 20             | AN, W   | -626                       | -2.3%                                |
| 21             | C, C  | -2,333                     | -32.2%                               |
| 22             | W, W  | 314                        | 1.3%                                 |
| 23             | W, W  | -987                       | -5.7%                                |
| 24             | W, W  | -124                       | -1.5%                                |
| 25             | W, W  | -29                        | -0.3%                                |
| 26             | W, AN   | -30                        | -0.2%                                |
| 27             | AN, AN  | 954                        | 8.9%                                 |
| 28             | D, D  | -1,365                     | -8.2%                                |
| 29             | D, D  | 904                        | 1552.9%                              |
| 30             | AN, BN  | -361                       | -2.5%                                |
| 31             | BN, D   | 398                        | 8.6%                                 |
| 32             | AN, W   | -215                       | -10.6%                               |
| 33             | W, W  | -793                       | -17.0%                               |
| 34             | D, C  | 2,528                      | 95.8%                                |
| 35             | C, C  | -2,940                     | -111.2%                              |
| 36             | D, BN   | 1,125                      | 4.6%                                 |
| 37             | BN, AN  | 200                        | 1.1%                                 |
| 38             | W, W  | -281                       | -3.2%                                |
| 39             | BN, D   | 204                        | 2.1%                                 |
| 40             | D, C  | 298                        | 6.8%                                 |
| 41             | C, C  | -3,130                     | -10.6%                               |
| 42             | C, C  | -2,109                     | -5.0%                                |
| <b>Average</b> |   | <b>-504</b>                | <b>27.8%</b>                         |
| <b>Maximum</b> |   | <b>2,528</b>               | <b>1552.9%</b>                       |
| <b>Minimum</b> |   | <b>-6,384</b>              | <b>-118.4%</b>                       |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-218. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 8 (SR8) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | -543                       | -0.2%                                |
| 2    | W, W  | -141                       | -0.1%                                |
| 3    | C, C  | 135                        | 0.1%                                 |
| 4    | C, C  | -2,400                     | -1.2%                                |
| 5    | AN, W   | 2,104                      | 0.6%                                 |
| 6    | BN, AN  | -578                       | -0.2%                                |
| 7    | AN, W   | -917                       | -0.3%                                |
| 8    | D, D  | 1,461                      | 0.6%                                 |
| 9    | W, W  | -320                       | -0.1%                                |
| 10   | W, W  | 75                         | 0.0%                                 |
| 11   | W, AN   | 365                        | 0.2%                                 |
| 12   | D, D  | -486                       | -0.3%                                |
| 13   | W, W  | -400                       | -0.2%                                |
| 14   | D, D  | 183                        | 0.1%                                 |
| 15   | C, C  | -927                       | -0.5%                                |
| 16   | D, C  | 553                        | 0.2%                                 |
| 17   | C, C  | -269                       | -0.1%                                |
| 18   | C, C  | -1,399                     | -0.6%                                |
| 19   | C, C  | 1,776                      | 0.7%                                 |
| 20   | AN, W   | 657                        | 0.2%                                 |
| 21   | C, C  | -1,222                     | -0.5%                                |
| 22   | W, W  | 452                        | 0.1%                                 |
| 23   | W, W  | -569                       | -0.2%                                |
| 24   | W, W  | 204                        | 0.1%                                 |
| 25   | W, W  | 52                         | 0.0%                                 |
| 26   | W, AN   | -77                        | 0.0%                                 |
| 27   | AN, AN  | 938                        | 0.4%                                 |
| 28   | D, D  | -583                       | -0.2%                                |
| 29   | D, D  | 118                        | 0.1%                                 |
| 30   | AN, BN  | -72                        | 0.0%                                 |
| 31   | BN, D   | 378                        | 0.2%                                 |
| 32   | AN, W   | -826                       | -0.3%                                |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | 369                        | 0.1%                                 |
| 34             | D, C  | 970                        | 0.4%                                 |
| 35             | C, C  | -1,237                     | -0.6%                                |
| 36             | D, BN   | 569                        | 0.2%                                 |
| 37             | BN, AN  | -258                       | -0.1%                                |
| 38             | W, W  | 43                         | 0.0%                                 |
| 39             | BN, D   | 296                        | 0.1%                                 |
| 40             | D, C  | -88                        | 0.0%                                 |
| 41             | C, C  | -112                       | 0.0%                                 |
| 42             | C, C  | -965                       | -0.4%                                |
| <b>Average</b> |   | <b>-64</b>                 | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>2,104</b>               | <b>0.7%</b>                          |
| <b>Minimum</b> |   | <b>-2,400</b>              | <b>-1.2%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-219. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 9 (SR9) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 677                        | 0.2%                                 |
| 2    | W, W  | -1,667                     | -0.4%                                |
| 3    | C, C  | -2,023                     | -0.4%                                |
| 4    | C, C  | -13,024                    | -3.6%                                |
| 5    | AN, W   | 7,316                      | 4.2%                                 |
| 6    | BN, AN  | -575                       | -0.2%                                |
| 7    | AN, W   | 1,176                      | 0.4%                                 |
| 8    | D, D  | -587                       | -0.2%                                |
| 9    | W, W  | 3,859                      | 1.4%                                 |
| 10   | W, W  | 24                         | 0.0%                                 |
| 11   | W, AN   | -3,997                     | -0.9%                                |
| 12   | D, D  | 2,363                      | 0.5%                                 |
| 13   | W, W  | 1,250                      | 0.3%                                 |
| 14   | D, D  | -171                       | 0.0%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 15             | C, C  | -6,969                     | -1.8%                                |
| 16             | D, C  | 7,237                      | 2.3%                                 |
| 17             | C, C  | 1,781                      | 0.4%                                 |
| 18             | C, C  | 635                        | 0.2%                                 |
| 19             | C, C  | 18,673                     | 6.2%                                 |
| 20             | AN, W   | -11,894                    | -5.8%                                |
| 21             | C, C  | -5,544                     | -1.5%                                |
| 22             | W, W  | -564                       | -0.3%                                |
| 23             | W, W  | -3,174                     | -1.1%                                |
| 24             | W, W  | 1,171                      | 0.3%                                 |
| 25             | W, W  | -601                       | -0.2%                                |
| 26             | W, AN   | -4,208                     | -1.0%                                |
| 27             | AN, AN  | 3,641                      | 0.9%                                 |
| 28             | D, D  | -158                       | 0.0%                                 |
| 29             | D, D  | 1,977                      | 0.5%                                 |
| 30             | AN, BN  | -1,839                     | -0.5%                                |
| 31             | BN, D   | -991                       | -0.3%                                |
| 32             | AN, W   | 939                        | 0.2%                                 |
| 33             | W, W  | -2,447                     | -0.7%                                |
| 34             | D, C  | 4,507                      | 1.0%                                 |
| 35             | C, C  | -6,086                     | -1.4%                                |
| 36             | D, BN   | 2,400                      | 0.6%                                 |
| 37             | BN, AN  | 3,724                      | 1.1%                                 |
| 38             | W, W  | -2,441                     | -0.8%                                |
| 39             | BN, D   | -1,908                     | -0.5%                                |
| 40             | D, C  | 1,093                      | 0.3%                                 |
| 41             | C, C  | -12,839                    | -3.1%                                |
| 42             | C, C  | 9,356                      | 2.8%                                 |
| <b>Average</b> |   | <b>-236</b>                | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>18,673</b>              | <b>6.2%</b>                          |
| <b>Minimum</b> |   | <b>-13,024</b>             | <b>-5.8%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-220. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 10 (SR10) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | -2,617                     | -3.0%                                |
| 2    | W, W  | -647                       | -0.7%                                |
| 3    | C, C  | -556                       | -0.6%                                |
| 4    | C, C  | -8,179                     | -36.4%                               |
| 5    | AN, W   | -2,479                     | -14.7%                               |
| 6    | BN, AN  | -1,146                     | -1.7%                                |
| 7    | AN, W   | -1,288                     | -3.0%                                |
| 8    | D, D  | -807                       | -1.0%                                |
| 9    | W, W  | -397                       | -0.6%                                |
| 10   | W, W  | -221                       | -0.3%                                |
| 11   | W, AN   | -194                       | -0.2%                                |
| 12   | D, D  | -781                       | -0.6%                                |
| 13   | W, W  | -100                       | -0.1%                                |
| 14   | D, D  | -451                       | -0.4%                                |
| 15   | C, C  | -87                        | -0.1%                                |
| 16   | D, C  | 820                        | 1.1%                                 |
| 17   | C, C  | 1,227                      | 2.1%                                 |
| 18   | C, C  | -1,127                     | -20.5%                               |
| 19   | C, C  | -1,257                     | -10.6%                               |
| 20   | AN, W   | 597                        | 3.1%                                 |
| 21   | C, C  | -2,428                     | -7.5%                                |
| 22   | W, W  | 49                         | 0.8%                                 |
| 23   | W, W  | 1,376                      | 2.5%                                 |
| 24   | W, W  | 445                        | 0.6%                                 |
| 25   | W, W  | -1,149                     | -1.5%                                |
| 26   | W, AN   | -843                       | -0.7%                                |
| 27   | AN, AN  | -570                       | -0.6%                                |
| 28   | D, D  | -554                       | -0.5%                                |
| 29   | D, D  | -777                       | -0.8%                                |
| 30   | AN, BN  | -18                        | 0.0%                                 |
| 31   | BN, D   | 58                         | 0.1%                                 |
| 32   | AN, W   | -355                       | -0.3%                                |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | -1,251                     | -1.1%                                |
| 34             | D, C  | -357                       | -0.3%                                |
| 35             | C, C  | -688                       | -0.8%                                |
| 36             | D, BN   | -53                        | -0.1%                                |
| 37             | BN, AN  | 202                        | 0.3%                                 |
| 38             | W, W  | 1,357                      | 1.2%                                 |
| 39             | BN, D   | 566                        | 0.4%                                 |
| 40             | D, C  | -1,224                     | -1.1%                                |
| 41             | C, C  | -10,110                    | -21.3%                               |
| 42             | C, C  | -6,861                     | -81.7%                               |
| <b>Average</b> |   | <b>-1,021</b>              | <b>-4.8%</b>                         |
| <b>Maximum</b> |   | <b>1,376</b>               | <b>3.1%</b>                          |
| <b>Minimum</b> |   | <b>-10,110</b>             | <b>-81.7%</b>                        |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-221. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 11 (SR11) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | -1,002                     | -2.4%                                |
| 2    | W, W  | -704                       | -1.5%                                |
| 3    | C, C  | -666                       | -3.3%                                |
| 4    | C, C  | 18,095                     | 19.0%                                |
| 5    | AN, W   | -12,288                    | -17.1%                               |
| 6    | BN, AN  | -456                       | -1.5%                                |
| 7    | AN, W   | -1,152                     | -15.4%                               |
| 8    | D, D  | -151                       | -0.8%                                |
| 9    | W, W  | -1,269                     | -6.5%                                |
| 10   | W, W  | -1,068                     | -3.4%                                |
| 11   | W, AN   | -339                       | -0.3%                                |
| 12   | D, D  | -784                       | -1.1%                                |
| 13   | W, W  | -2,526                     | -4.8%                                |
| 14   | D, D  | 1,467                      | 3.7%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 15             | C, C  | 269                        | 1.2%                                 |
| 16             | D, C  | 223                        | 0.4%                                 |
| 17             | C, C  | -760                       | -1.2%                                |
| 18             | C, C  | 1,189                      | 1.5%                                 |
| 19             | C, C  | 121                        | 0.2%                                 |
| 20             | AN, W   | -3,348                     | -7.7%                                |
| 21             | C, C  | -4,330                     | -9.4%                                |
| 22             | W, W  | -2,513                     | -6.4%                                |
| 23             | W, W  | -716                       | -6.9%                                |
| 24             | W, W  | -4,037                     | -19.2%                               |
| 25             | W, W  | 6,050                      | 13.5%                                |
| 26             | W, AN   | 1,595                      | 1.5%                                 |
| 27             | AN, AN  | -853                       | -1.7%                                |
| 28             | D, D  | 934                        | 2.0%                                 |
| 29             | D, D  | 133                        | 0.4%                                 |
| 30             | AN, BN  | 175                        | 0.5%                                 |
| 31             | BN, D   | 117                        | 0.3%                                 |
| 32             | AN, W   | 4,618                      | 9.1%                                 |
| 33             | W, W  | -3,612                     | -5.5%                                |
| 34             | D, C  | 726                        | 1.0%                                 |
| 35             | C, C  | -15                        | -0.3%                                |
| 36             | D, BN   | 109                        | 0.6%                                 |
| 37             | BN, AN  | 300                        | 4.1%                                 |
| 38             | W, W  | 147                        | 32.3%                                |
| 39             | BN, D   | 67                         | 0.1%                                 |
| 40             | D, C  | 75                         | 0.6%                                 |
| 41             | C, C  | 17,348                     | 28.1%                                |
| 42             | C, C  | -13,158                    | -14.5%                               |
| <b>Average</b> |   | <b>-47</b>                 | <b>-0.3%</b>                         |
| <b>Maximum</b> |   | <b>18,095</b>              | <b>32.3%</b>                         |
| <b>Minimum</b> |   | <b>-13,158</b>             | <b>-19.2%</b>                        |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-222. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 12 (SR12) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | -662                       | -0.8%                                |
| 2    | W, W  | -483                       | -0.6%                                |
| 3    | C, C  | -253                       | -0.2%                                |
| 4    | C, C  | -404                       | -0.2%                                |
| 5    | AN, W   | -134                       | -0.1%                                |
| 6    | BN, AN  | -87                        | -0.1%                                |
| 7    | AN, W   | -126                       | -0.1%                                |
| 8    | D, D  | -95                        | -0.1%                                |
| 9    | W, W  | -51                        | -0.1%                                |
| 10   | W, W  | -27                        | 0.0%                                 |
| 11   | W, AN   | 37                         | 0.1%                                 |
| 12   | D, D  | -154                       | -0.2%                                |
| 13   | W, W  | -206                       | -0.3%                                |
| 14   | D, D  | -26                        | 0.0%                                 |
| 15   | C, C  | 54                         | 0.0%                                 |
| 16   | D, C  | 196                        | 0.1%                                 |
| 17   | C, C  | -623                       | -0.3%                                |
| 18   | C, C  | 1,362                      | 0.6%                                 |
| 19   | C, C  | 306                        | 0.1%                                 |
| 20   | AN, W   | -2,197                     | -1.1%                                |
| 21   | C, C  | -1,560                     | -0.8%                                |
| 22   | W, W  | 58                         | 0.0%                                 |
| 23   | W, W  | 334                        | 0.3%                                 |
| 24   | W, W  | 169                        | 0.1%                                 |
| 25   | W, W  | 36                         | 0.0%                                 |
| 26   | W, AN   | -85                        | -0.2%                                |
| 27   | AN, AN  | -143                       | -0.2%                                |
| 28   | D, D  | -94                        | -0.1%                                |
| 29   | D, D  | -75                        | -0.1%                                |
| 30   | AN, BN  | 61                         | 0.1%                                 |
| 31   | BN, D   | 94                         | 0.1%                                 |
| 32   | AN, W   | 62                         | 0.1%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | -41                        | -0.1%                                |
| 34             | D, C  | -129                       | -0.2%                                |
| 35             | C, C  | -540                       | -0.4%                                |
| 36             | D, BN   | 286                        | 0.2%                                 |
| 37             | BN, AN  | 117                        | 0.1%                                 |
| 38             | W, W  | 213                        | 0.2%                                 |
| 39             | BN, D   | 184                        | 0.3%                                 |
| 40             | D, C  | -13                        | 0.0%                                 |
| 41             | C, C  | -111                       | -0.1%                                |
| 42             | C, C  | 162                        | 0.1%                                 |
| <b>Average</b> |   | <b>-109</b>                | <b>-0.1%</b>                         |
| <b>Maximum</b> |   | <b>1,362</b>               | <b>0.6%</b>                          |
| <b>Minimum</b> |   | <b>-2,197</b>              | <b>-1.1%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-223. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 13 (SR13) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 346                        | 0.1%                                 |
| 2    | W, W  | -175                       | 0.0%                                 |
| 3    | C, C  | 131                        | 0.0%                                 |
| 4    | C, C  | -4,018                     | -0.6%                                |
| 5    | AN, W   | -1,096                     | -0.1%                                |
| 6    | BN, AN  | -293                       | 0.0%                                 |
| 7    | AN, W   | -109                       | 0.0%                                 |
| 8    | D, D  | 127                        | 0.0%                                 |
| 9    | W, W  | 98                         | 0.0%                                 |
| 10   | W, W  | 138                        | 0.0%                                 |
| 11   | W, AN   | 168                        | 0.0%                                 |
| 12   | D, D  | 207                        | 0.0%                                 |
| 13   | W, W  | 353                        | 0.1%                                 |
| 14   | D, D  | 264                        | 0.0%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 15             | C, C  | 341                        | 0.1%                                 |
| 16             | D, C  | 447                        | 0.1%                                 |
| 17             | C, C  | 451                        | 0.1%                                 |
| 18             | C, C  | -728                       | -0.1%                                |
| 19             | C, C  | -639                       | -0.1%                                |
| 20             | AN, W   | -106                       | 0.0%                                 |
| 21             | C, C  | -235                       | 0.0%                                 |
| 22             | W, W  | 381                        | 0.0%                                 |
| 23             | W, W  | 667                        | 0.1%                                 |
| 24             | W, W  | 426                        | 0.1%                                 |
| 25             | W, W  | 337                        | 0.0%                                 |
| 26             | W, AN   | 318                        | 0.1%                                 |
| 27             | AN, AN  | 308                        | 0.0%                                 |
| 28             | D, D  | 259                        | 0.0%                                 |
| 29             | D, D  | 126                        | 0.0%                                 |
| 30             | AN, BN  | 385                        | 0.1%                                 |
| 31             | BN, D   | 166                        | 0.0%                                 |
| 32             | AN, W   | 418                        | 0.1%                                 |
| 33             | W, W  | 204                        | 0.0%                                 |
| 34             | D, C  | 279                        | 0.0%                                 |
| 35             | C, C  | 321                        | 0.1%                                 |
| 36             | D, BN   | 391                        | 0.1%                                 |
| 37             | BN, AN  | 478                        | 0.1%                                 |
| 38             | W, W  | 593                        | 0.1%                                 |
| 39             | BN, D   | 629                        | 0.1%                                 |
| 40             | D, C  | 486                        | 0.1%                                 |
| 41             | C, C  | -5,219                     | -0.8%                                |
| 42             | C, C  | -3,921                     | -0.6%                                |
| <b>Average</b> |   | <b>-150</b>                | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>667</b>                 | <b>0.1%</b>                          |
| <b>Minimum</b> |   | <b>-5,219</b>              | <b>-0.8%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-224. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 14 (SR14) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 389                        | 0.7%                                 |
| 2    | W, W  | 28                         | 0.1%                                 |
| 3    | C, C  | 4                          | 0.0%                                 |
| 4    | C, C  | 19                         | 0.0%                                 |
| 5    | AN, W   | 12                         | 0.0%                                 |
| 6    | BN, AN  | 162                        | 0.3%                                 |
| 7    | AN, W   | 12                         | 0.0%                                 |
| 8    | D, D  | -11                        | 0.0%                                 |
| 9    | W, W  | 7                          | 0.0%                                 |
| 10   | W, W  | 6                          | 0.0%                                 |
| 11   | W, AN   | 438                        | 0.8%                                 |
| 12   | D, D  | -20                        | 0.0%                                 |
| 13   | W, W  | -118                       | -0.1%                                |
| 14   | D, D  | -349                       | -0.8%                                |
| 15   | C, C  | -26                        | -0.1%                                |
| 16   | D, C  | 24                         | 0.1%                                 |
| 17   | C, C  | -130                       | -0.3%                                |
| 18   | C, C  | -72                        | -0.1%                                |
| 19   | C, C  | -39                        | -0.1%                                |
| 20   | AN, W   | -49                        | -0.1%                                |
| 21   | C, C  | 93                         | 0.2%                                 |
| 22   | W, W  | -60                        | -0.1%                                |
| 23   | W, W  | -18                        | 0.0%                                 |
| 24   | W, W  | 35                         | 0.0%                                 |
| 25   | W, W  | 8                          | 0.0%                                 |
| 26   | W, AN   | 8                          | 0.0%                                 |
| 27   | AN, AN  | -16                        | 0.0%                                 |
| 28   | D, D  | -2                         | 0.0%                                 |
| 29   | D, D  | 12                         | 0.0%                                 |
| 30   | AN, BN  | -44                        | -0.1%                                |
| 31   | BN, D   | 23                         | 0.0%                                 |
| 32   | AN, W   | -51                        | -0.1%                                |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | 135                        | 0.3%                                 |
| 34             | D, C  | 4                          | 0.0%                                 |
| 35             | C, C  | -7                         | 0.0%                                 |
| 36             | D, BN   | -49                        | -0.1%                                |
| 37             | BN, AN  | -75                        | -0.1%                                |
| 38             | W, W  | -4                         | 0.0%                                 |
| 39             | BN, D   | 52                         | 0.1%                                 |
| 40             | D, C  | 105                        | 0.2%                                 |
| 41             | C, C  | -46                        | -0.1%                                |
| 42             | C, C  | 3                          | 0.0%                                 |
| <b>Average</b> |   | <b>9</b>                   | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>438</b>                 | <b>0.8%</b>                          |
| <b>Minimum</b> |   | <b>-349</b>                | <b>-0.8%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-225. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 15 (SR15) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | -1,134                     | -0.2%                                |
| 2    | W, W  | -462                       | -0.1%                                |
| 3    | C, C  | -408                       | -0.1%                                |
| 4    | C, C  | -1,090                     | -0.2%                                |
| 5    | AN, W   | -732                       | -0.1%                                |
| 6    | BN, AN  | -284                       | -0.1%                                |
| 7    | AN, W   | 125                        | 0.0%                                 |
| 8    | D, D  | -565                       | -0.1%                                |
| 9    | W, W  | 450                        | 0.1%                                 |
| 10   | W, W  | 901                        | 0.2%                                 |
| 11   | W, AN   | 246                        | 0.1%                                 |
| 12   | D, D  | -838                       | -0.2%                                |
| 13   | W, W  | 640                        | 0.1%                                 |
| 14   | D, D  | 474                        | 0.1%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 15             | C, C  | 1,525                      | 0.4%                                 |
| 16             | D, C  | 1,806                      | 0.4%                                 |
| 17             | C, C  | 1,414                      | 0.3%                                 |
| 18             | C, C  | 850                        | 0.2%                                 |
| 19             | C, C  | 333                        | 0.1%                                 |
| 20             | AN, W   | 62                         | 0.0%                                 |
| 21             | C, C  | -294                       | -0.1%                                |
| 22             | W, W  | 2,082                      | 0.2%                                 |
| 23             | W, W  | 655                        | 0.1%                                 |
| 24             | W, W  | -1,798                     | -0.3%                                |
| 25             | W, W  | -549                       | -0.1%                                |
| 26             | W, AN   | -343                       | -0.1%                                |
| 27             | AN, AN  | -1,425                     | -0.3%                                |
| 28             | D, D  | -1,083                     | -0.3%                                |
| 29             | D, D  | -395                       | -0.1%                                |
| 30             | AN, BN  | 33                         | 0.0%                                 |
| 31             | BN, D   | -1,186                     | -0.3%                                |
| 32             | AN, W   | -1,471                     | -0.2%                                |
| 33             | W, W  | -87                        | 0.0%                                 |
| 34             | D, C  | -1,500                     | -0.4%                                |
| 35             | C, C  | -1,357                     | -0.3%                                |
| 36             | D, BN   | -501                       | -0.1%                                |
| 37             | BN, AN  | 42                         | 0.0%                                 |
| 38             | W, W  | 349                        | 0.0%                                 |
| 39             | BN, D   | -103                       | 0.0%                                 |
| 40             | D, C  | 593                        | 0.1%                                 |
| 41             | C, C  | 1,047                      | 0.2%                                 |
| 42             | C, C  | -828                       | -0.2%                                |
| <b>Average</b> |   | <b>-114</b>                | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>2,082</b>               | <b>0.4%</b>                          |
| <b>Minimum</b> |   | <b>-1,798</b>              | <b>-0.4%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-226. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 16 (SR16) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 120                        | 0.4%                                 |
| 2    | W, W  | 78                         | 0.3%                                 |
| 3    | C, C  | 85                         | 0.2%                                 |
| 4    | C, C  | 186                        | 0.2%                                 |
| 5    | AN, W   | 59                         | 0.1%                                 |
| 6    | BN, AN  | 118                        | 0.3%                                 |
| 7    | AN, W   | 137                        | 0.4%                                 |
| 8    | D, D  | 103                        | 0.3%                                 |
| 9    | W, W  | 124                        | 0.3%                                 |
| 10   | W, W  | 105                        | 0.3%                                 |
| 11   | W, AN   | 110                        | 0.7%                                 |
| 12   | D, D  | 127                        | 0.5%                                 |
| 13   | W, W  | 135                        | 0.5%                                 |
| 14   | D, D  | 131                        | 0.5%                                 |
| 15   | C, C  | 114                        | 0.3%                                 |
| 16   | D, C  | 147                        | 0.3%                                 |
| 17   | C, C  | 154                        | 0.2%                                 |
| 18   | C, C  | 182                        | 0.3%                                 |
| 19   | C, C  | 178                        | 0.2%                                 |
| 20   | AN, W   | 116                        | 0.2%                                 |
| 21   | C, C  | 155                        | 0.3%                                 |
| 22   | W, W  | 182                        | 0.4%                                 |
| 23   | W, W  | 217                        | 0.5%                                 |
| 24   | W, W  | 135                        | 0.4%                                 |
| 25   | W, W  | 143                        | 0.5%                                 |
| 26   | W, AN   | 102                        | 0.4%                                 |
| 27   | AN, AN  | 125                        | 0.5%                                 |
| 28   | D, D  | 101                        | 0.2%                                 |
| 29   | D, D  | 141                        | 0.3%                                 |
| 30   | AN, BN  | 151                        | 0.3%                                 |
| 31   | BN, D   | 142                        | 0.3%                                 |
| 32   | AN, W   | 139                        | 0.3%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | 142                        | 0.5%                                 |
| 34             | D, C  | 130                        | 0.3%                                 |
| 35             | C, C  | 146                        | 0.2%                                 |
| 36             | D, BN   | 174                        | 0.3%                                 |
| 37             | BN, AN  | 137                        | 0.2%                                 |
| 38             | W, W  | 178                        | 0.5%                                 |
| 39             | BN, D   | 152                        | 0.3%                                 |
| 40             | D, C  | 128                        | 0.2%                                 |
| 41             | C, C  | 243                        | 0.3%                                 |
| 42             | C, C  | 38                         | 0.0%                                 |
| <b>Average</b> |   | <b>136</b>                 | <b>0.3%</b>                          |
| <b>Maximum</b> |   | <b>243</b>                 | <b>0.7%</b>                          |
| <b>Minimum</b> |   | <b>38</b>                  | <b>0.0%</b>                          |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-227. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 17 (SR17) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 50                         | 0.2%                                 |
| 2    | W, W  | 16                         | 0.0%                                 |
| 3    | C, C  | 49                         | 0.0%                                 |
| 4    | C, C  | 6                          | 0.0%                                 |
| 5    | AN, W   | 104                        | 0.1%                                 |
| 6    | BN, AN  | 111                        | 1.5%                                 |
| 7    | AN, W   | 88                         | 0.3%                                 |
| 8    | D, D  | 139                        | 1.2%                                 |
| 9    | W, W  | 73                         | 0.3%                                 |
| 10   | W, W  | 85                         | 0.2%                                 |
| 11   | W, AN   | 64                         | 0.1%                                 |
| 12   | D, D  | 151                        | 1.9%                                 |
| 13   | W, W  | 99                         | 0.7%                                 |
| 14   | D, D  | 87                         | 1.3%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 15             | C, C  | 167                        | 0.3%                                 |
| 16             | D, C  | 36                         | 0.1%                                 |
| 17             | C, C  | 12                         | 0.0%                                 |
| 18             | C, C  | -4                         | 0.0%                                 |
| 19             | C, C  | 5                          | 0.0%                                 |
| 20             | AN, W   | 90                         | 0.1%                                 |
| 21             | C, C  | 110                        | 0.1%                                 |
| 22             | W, W  | 135                        | 0.2%                                 |
| 23             | W, W  | 157                        | 0.4%                                 |
| 24             | W, W  | 161                        | 1.1%                                 |
| 25             | W, W  | 176                        | 7.7%                                 |
| 26             | W, AN   | 155                        | 0.8%                                 |
| 27             | AN, AN  | 178                        | 1.0%                                 |
| 28             | D, D  | 127                        | 0.2%                                 |
| 29             | D, D  | 57                         | 0.1%                                 |
| 30             | AN, BN  | 59                         | 0.1%                                 |
| 31             | BN, D   | 60                         | 0.1%                                 |
| 32             | AN, W   | 127                        | 0.2%                                 |
| 33             | W, W  | 182                        | 0.6%                                 |
| 34             | D, C  | 198                        | 0.3%                                 |
| 35             | C, C  | 84                         | 0.1%                                 |
| 36             | D, BN   | 96                         | 0.1%                                 |
| 37             | BN, AN  | 178                        | 0.1%                                 |
| 38             | W, W  | 257                        | 0.4%                                 |
| 39             | BN, D   | 167                        | 0.3%                                 |
| 40             | D, C  | 89                         | 0.1%                                 |
| 41             | C, C  | 64                         | 0.0%                                 |
| 42             | C, C  | 4                          | 0.0%                                 |
| <b>Average</b> |   | <b>101</b>                 | <b>0.5%</b>                          |
| <b>Maximum</b> |   | <b>257</b>                 | <b>7.7%</b>                          |
| <b>Minimum</b> |   | <b>-4</b>                  | <b>0.0%</b>                          |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-228. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 18 (SR18) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | -1,934                     | -3.5%                                |
| 2    | W, W  | -1,803                     | -2.5%                                |
| 3    | C, C  | -1,117                     | -3.4%                                |
| 4    | C, C  | -504                       | -1.2%                                |
| 5    | AN, W   | -876                       | -0.7%                                |
| 6    | BN, AN  | -3,260                     | -1.6%                                |
| 7    | AN, W   | -2,298                     | -1.0%                                |
| 8    | D, D  | -2,461                     | -0.9%                                |
| 9    | W, W  | -2,286                     | -0.8%                                |
| 10   | W, W  | -2,739                     | -0.3%                                |
| 11   | W, AN   | -2,506                     | -0.2%                                |
| 12   | D, D  | -5,532                     | -0.8%                                |
| 13   | W, W  | -4,128                     | -0.5%                                |
| 14   | D, D  | -3,652                     | -0.5%                                |
| 15   | C, C  | -3,002                     | -0.8%                                |
| 16   | D, C  | -2,648                     | -1.7%                                |
| 17   | C, C  | -1,726                     | -29.2%                               |
| 18   | C, C  | -1,127                     | -2.1%                                |
| 19   | C, C  | -563                       | -0.8%                                |
| 20   | AN, W   | -480                       | -0.5%                                |
| 21   | C, C  | -533                       | -6.2%                                |
| 22   | W, W  | -1,904                     | -6.4%                                |
| 23   | W, W  | -2,561                     | -0.8%                                |
| 24   | W, W  | -20,128                    | -9.0%                                |
| 25   | W, W  | -11,324                    | -2.3%                                |
| 26   | W, AN   | -7,934                     | -1.0%                                |
| 27   | AN, AN  | -7,842                     | -1.4%                                |
| 28   | D, D  | -7,110                     | -1.6%                                |
| 29   | D, D  | -6,936                     | -3.3%                                |
| 30   | AN, BN  | -6,654                     | -9.0%                                |
| 31   | BN, D   | -4,775                     | -13.4%                               |
| 32   | AN, W   | -5,841                     | -8.4%                                |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | -6,762                     | -3.6%                                |
| 34             | D, C  | -5,725                     | -3.6%                                |
| 35             | C, C  | -2,885                     | -5.7%                                |
| 36             | D, BN   | -1,420                     | -1.8%                                |
| 37             | BN, AN  | -1,528                     | -1.8%                                |
| 38             | W, W  | -10,784                    | -4.6%                                |
| 39             | BN, D   | -7,253                     | -2.7%                                |
| 40             | D, C  | -4,517                     | -13.0%                               |
| 41             | C, C  | -993                       | -1.6%                                |
| 42             | C, C  | -662                       | -0.7%                                |
| <b>Average</b> |   | <b>-4,065</b>              | <b>-3.7%</b>                         |
| <b>Maximum</b> |   | <b>-480</b>                | <b>-0.2%</b>                         |
| <b>Minimum</b> |   | <b>-20,128</b>             | <b>-29.2%</b>                        |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-229. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 19 (SR19) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 0                          | 0.0%                                 |
| 2    | W, W  | 0                          | 0.0%                                 |
| 3    | C, C  | 0                          | 0.0%                                 |
| 4    | C, C  | 0                          | 0.0%                                 |
| 5    | AN, W   | 0                          | 0.0%                                 |
| 6    | BN, AN  | 0                          | 0.0%                                 |
| 7    | AN, W   | 0                          | 0.0%                                 |
| 8    | D, D  | 3                          | 0.1%                                 |
| 9    | W, W  | 1                          | 0.0%                                 |
| 10   | W, W  | 1                          | 0.0%                                 |
| 11   | W, AN   | -1                         | 0.0%                                 |
| 12   | D, D  | -1                         | -0.1%                                |
| 13   | W, W  | -2                         | 0.0%                                 |
| 14   | D, D  | -1                         | 0.0%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 15             | C, C  | 0                          | 0.0%                                 |
| 16             | D, C  | 0                          | 0.0%                                 |
| 17             | C, C  | 0                          | 0.0%                                 |
| 18             | C, C  | 0                          | 0.0%                                 |
| 19             | C, C  | 0                          | 0.0%                                 |
| 20             | AN, W   | 0                          | 0.0%                                 |
| 21             | C, C  | 0                          | 0.0%                                 |
| 22             | W, W  | -3                         | -0.1%                                |
| 23             | W, W  | -2                         | -0.3%                                |
| 24             | W, W  | -1                         | 0.0%                                 |
| 25             | W, W  | 6                          | 0.0%                                 |
| 26             | W, AN   | -5                         | 0.0%                                 |
| 27             | AN, AN  | -2                         | -1.1%                                |
| 28             | D, D  | -1                         | -0.1%                                |
| 29             | D, D  | 0                          | 0.0%                                 |
| 30             | AN, BN  | 0                          | 0.0%                                 |
| 31             | BN, D   | 0                          | 0.0%                                 |
| 32             | AN, W   | -3                         | -0.1%                                |
| 33             | W, W  | -4                         | -0.1%                                |
| 34             | D, C  | -2                         | 0.0%                                 |
| 35             | C, C  | 0                          | 0.0%                                 |
| 36             | D, BN   | 0                          | 0.0%                                 |
| 37             | BN, AN  | 0                          | 0.0%                                 |
| 38             | W, W  | -2                         | -0.1%                                |
| 39             | BN, D   | -1                         | -0.2%                                |
| 40             | D, C  | 0                          | 0.0%                                 |
| 41             | C, C  | 0                          | 0.0%                                 |
| 42             | C, C  | 0                          | 0.0%                                 |
| <b>Average</b> |   | <b>0</b>                   | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>6</b>                   | <b>0.1%</b>                          |
| <b>Minimum</b> |   | <b>-5</b>                  | <b>-1.1%</b>                         |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-230. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 20 (SR20) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 0                          | 0.0%                                 |
| 2    | W, W  | 0                          | 0.0%                                 |
| 3    | C, C  | 0                          | 0.0%                                 |
| 4    | C, C  | 0                          | 0.0%                                 |
| 5    | AN, W   | 0                          | 0.0%                                 |
| 6    | BN, AN  | 0                          | 0.0%                                 |
| 7    | AN, W   | 0                          | 0.0%                                 |
| 8    | D, D  | 0                          | 0.0%                                 |
| 9    | W, W  | 0                          | 0.0%                                 |
| 10   | W, W  | 0                          | 0.0%                                 |
| 11   | W, AN   | 0                          | 0.0%                                 |
| 12   | D, D  | 0                          | 0.0%                                 |
| 13   | W, W  | 0                          | 0.0%                                 |
| 14   | D, D  | 0                          | 0.0%                                 |
| 15   | C, C  | 0                          | 0.0%                                 |
| 16   | D, C  | 0                          | 0.0%                                 |
| 17   | C, C  | 0                          | 0.0%                                 |
| 18   | C, C  | 0                          | 0.0%                                 |
| 19   | C, C  | 0                          | 0.0%                                 |
| 20   | AN, W   | 0                          | 0.0%                                 |
| 21   | C, C  | 0                          | 0.0%                                 |
| 22   | W, W  | 0                          | 0.0%                                 |
| 23   | W, W  | 0                          | 0.0%                                 |
| 24   | W, W  | 0                          | 0.0%                                 |
| 25   | W, W  | 0                          | 0.0%                                 |
| 26   | W, AN   | 0                          | 0.0%                                 |
| 27   | AN, AN  | 0                          | 0.0%                                 |
| 28   | D, D  | 0                          | 0.0%                                 |
| 29   | D, D  | 1                          | 0.0%                                 |
| 30   | AN, BN  | 0                          | 0.0%                                 |
| 31   | BN, D   | 0                          | 0.0%                                 |
| 32   | AN, W   | 0                          | 0.0%                                 |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 33             | W, W  | 0                          | 0.0%                                 |
| 34             | D, C  | 0                          | 0.0%                                 |
| 35             | C, C  | 0                          | 0.0%                                 |
| 36             | D, BN   | 0                          | 0.0%                                 |
| 37             | BN, AN  | 0                          | 0.0%                                 |
| 38             | W, W  | 0                          | 0.0%                                 |
| 39             | BN, D   | 0                          | 0.0%                                 |
| 40             | D, C  | 0                          | 0.0%                                 |
| 41             | C, C  | 0                          | 0.0%                                 |
| 42             | C, C  | 0                          | 0.0%                                 |
| <b>Average</b> |   | <b>0</b>                   | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>1</b>                   | <b>0.0%</b>                          |
| <b>Minimum</b> |   | <b>0</b>                   | <b>0.0%</b>                          |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-231. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 21 (SR21) for Alternative 2 With TUCP Without VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|------|---|----------------------------|--------------------------------------|
| 1    | W, W  | 0                          | 0.0%                                 |
| 2    | W, W  | 0                          | 0.0%                                 |
| 3    | C, C  | 0                          | 0.0%                                 |
| 4    | C, C  | 0                          | 0.0%                                 |
| 5    | AN, W   | 0                          | 0.0%                                 |
| 6    | BN, AN  | 0                          | 0.0%                                 |
| 7    | AN, W   | 0                          | 0.0%                                 |
| 8    | D, D  | 0                          | 0.0%                                 |
| 9    | W, W  | 0                          | 0.0%                                 |
| 10   | W, W  | -1                         | 0.0%                                 |
| 11   | W, AN   | -1                         | 0.0%                                 |
| 12   | D, D  | 0                          | 0.0%                                 |
| 13   | W, W  | -1                         | 0.0%                                 |
| 14   | D, D  | 0                          | 0.0%                                 |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1wTUCP minus NAA (AF) | Alt2v1wTUCP minus NAA (% Difference) |
|----------------|---|----------------------------|--------------------------------------|
| 15             | C, C  | 0                          | 0.0%                                 |
| 16             | D, C  | 0                          | 0.0%                                 |
| 17             | C, C  | 0                          | 0.0%                                 |
| 18             | C, C  | 0                          | 0.0%                                 |
| 19             | C, C  | 0                          | 0.0%                                 |
| 20             | AN, W   | 0                          | 0.0%                                 |
| 21             | C, C  | 0                          | 0.0%                                 |
| 22             | W, W  | 0                          | 0.0%                                 |
| 23             | W, W  | -1                         | 0.0%                                 |
| 24             | W, W  | -1                         | 0.0%                                 |
| 25             | W, W  | -3                         | 0.0%                                 |
| 26             | W, AN   | -3                         | 0.0%                                 |
| 27             | AN, AN  | -1                         | 0.0%                                 |
| 28             | D, D  | -1                         | 0.0%                                 |
| 29             | D, D  | 0                          | 0.0%                                 |
| 30             | AN, BN  | 0                          | 0.0%                                 |
| 31             | BN, D   | 0                          | 0.0%                                 |
| 32             | AN, W   | -1                         | 0.0%                                 |
| 33             | W, W  | -4                         | 0.0%                                 |
| 34             | D, C  | -2                         | 0.0%                                 |
| 35             | C, C  | 0                          | 0.0%                                 |
| 36             | D, BN   | 0                          | 0.0%                                 |
| 37             | BN, AN  | 0                          | 0.0%                                 |
| 38             | W, W  | -1                         | 0.0%                                 |
| 39             | BN, D   | -1                         | 0.0%                                 |
| 40             | D, C  | 0                          | 0.0%                                 |
| 41             | C, C  | 0                          | 0.0%                                 |
| 42             | C, C  | 0                          | 0.0%                                 |
| <b>Average</b> |   | <b>-1</b>                  | <b>0.0%</b>                          |
| <b>Maximum</b> |   | <b>0</b>                   | <b>0.0%</b>                          |
| <b>Minimum</b> |   | <b>-4</b>                  | <b>0.0%</b>                          |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

**I-1.2.4 Changes in Groundwater-Surface Water Interaction Flow, Alternative 2 without TUCP Without VA Compared to No Action Alternative**

Table I.1-232 through Table I.1-252 provide the annual simulated groundwater-surface water interaction flow through the model simulation period for each of the 21 model subregions for Alternative 2 without TUCP without VA compared to the No Action Alternative.

Table I.1-232. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 1 (SR1) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 1,526                 | 0.5%                            |
| 2    | W, W  | -291                  | -0.1%                           |
| 3    | C, C  | -679                  | -0.2%                           |
| 4    | C, C  | 14,863                | 5.7%                            |
| 5    | AN, W   | 7,733                 | 3.4%                            |
| 6    | BN, AN  | 4,683                 | 1.8%                            |
| 7    | AN, W   | -568                  | -0.2%                           |
| 8    | D, D  | 773                   | 0.3%                            |
| 9    | W, W  | 1,246                 | 0.5%                            |
| 10   | W, W  | -1,242                | -0.4%                           |
| 11   | W, AN   | -1,927                | -0.6%                           |
| 12   | D, D  | 1,404                 | 0.4%                            |
| 13   | W, W  | 630                   | 0.2%                            |
| 14   | D, D  | 1,061                 | 0.4%                            |
| 15   | C, C  | -1,762                | -0.7%                           |
| 16   | D, C  | 3,914                 | 1.6%                            |
| 17   | C, C  | -296                  | -0.1%                           |
| 18   | C, C  | 11,163                | 5.5%                            |
| 19   | C, C  | 17,858                | 9.3%                            |
| 20   | AN, W   | 3,963                 | 2.0%                            |
| 21   | C, C  | 379                   | 0.2%                            |
| 22   | W, W  | 2,034                 | 0.9%                            |
| 23   | W, W  | 418                   | 0.2%                            |
| 24   | W, W  | 2,881                 | 1.0%                            |
| 25   | W, W  | 477                   | 0.2%                            |
| 26   | W, AN   | -1,375                | -0.4%                           |
| 27   | AN, AN  | 1,983                 | 0.7%                            |
| 28   | D, D  | 2,221                 | 0.8%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 29             | D, D  | 353                   | 0.1%                            |
| 30             | AN, BN  | 4                     | 0.0%                            |
| 31             | BN, D   | 41                    | 0.0%                            |
| 32             | AN, W   | 627                   | 0.2%                            |
| 33             | W, W  | 1,863                 | 0.6%                            |
| 34             | D, C  | -1,651                | -0.5%                           |
| 35             | C, C  | 361                   | 0.1%                            |
| 36             | D, BN   | 1,340                 | 0.5%                            |
| 37             | BN, AN  | 853                   | 0.4%                            |
| 38             | W, W  | 1,170                 | 0.5%                            |
| 39             | BN, D   | -101                  | 0.0%                            |
| 40             | D, C  | 1,677                 | 0.6%                            |
| 41             | C, C  | 12,589                | 5.3%                            |
| 42             | C, C  | 5,470                 | 2.6%                            |
| <b>Average</b> |   | <b>2,325</b>          | <b>1.0%</b>                     |
| <b>Maximum</b> |   | <b>17,858</b>         | <b>9.3%</b>                     |
| <b>Minimum</b> |   | <b>-1,927</b>         | <b>-0.7%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-233. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 2 (SR2) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 3,040                 | 3.2%                            |
| 2    | W, W  | -201                  | -0.4%                           |
| 3    | C, C  | 35                    | 0.3%                            |
| 4    | C, C  | 6,817                 | 55.7%                           |
| 5    | AN, W   | -2,040                | -0.5%                           |
| 6    | BN, AN  | 8,693                 | 6.4%                            |
| 7    | AN, W   | 1,366                 | 0.8%                            |
| 8    | D, D  | 2,900                 | 2.4%                            |
| 9    | W, W  | 2,512                 | 1.8%                            |
| 10   | W, W  | -1,008                | -6.4%                           |
| 11   | W, AN   | -3,022                | -9.7%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 12             | D, D  | 3,065                 | 10.1%                           |
| 13             | W, W  | 3,398                 | 5.2%                            |
| 14             | D, D  | 3,253                 | 4.8%                            |
| 15             | C, C  | 1,416                 | 1.0%                            |
| 16             | D, C  | 12,992                | 6.5%                            |
| 17             | C, C  | 4,402                 | 3.9%                            |
| 18             | C, C  | 3,207                 | 1.9%                            |
| 19             | C, C  | 14,158                | 5.6%                            |
| 20             | AN, W   | 6,285                 | 1.8%                            |
| 21             | C, C  | 2,572                 | 2.9%                            |
| 22             | W, W  | 12,879                | 4.7%                            |
| 23             | W, W  | 6,185                 | 4.0%                            |
| 24             | W, W  | 7,316                 | 9.1%                            |
| 25             | W, W  | 1,962                 | 2.4%                            |
| 26             | W, AN   | -2,536                | -78.9%                          |
| 27             | AN, AN  | 4,259                 | 9.1%                            |
| 28             | D, D  | 4,976                 | 14.6%                           |
| 29             | D, D  | 2,683                 | 2.4%                            |
| 30             | AN, BN  | 842                   | 0.5%                            |
| 31             | BN, D   | 291                   | 0.4%                            |
| 32             | AN, W   | 1,266                 | 1.6%                            |
| 33             | W, W  | 3,077                 | 8.3%                            |
| 34             | D, C  | -2,210                | -9.6%                           |
| 35             | C, C  | 1,577                 | 1.8%                            |
| 36             | D, BN   | 5,695                 | 4.4%                            |
| 37             | BN, AN  | 3,395                 | 1.8%                            |
| 38             | W, W  | 4,506                 | 2.8%                            |
| 39             | BN, D   | 531                   | 0.8%                            |
| 40             | D, C  | 2,959                 | 2.3%                            |
| 41             | C, C  | 1,116                 | 1.0%                            |
| 42             | C, C  | 6,798                 | 3.1%                            |
| <b>Average</b> |   | <b>3,367</b>          | <b>2.0%</b>                     |
| <b>Maximum</b> |   | <b>14,158</b>         | <b>55.7%</b>                    |
| <b>Minimum</b> |   | <b>-3,022</b>         | <b>-78.9%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-234. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 3 (SR3) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 989                   | 1.0%                            |
| 2    | W, W  | 976                   | 1.0%                            |
| 3    | C, C  | 1,533                 | 1.8%                            |
| 4    | C, C  | 13,255                | 20.2%                           |
| 5    | AN, W   | 13,978                | 28.6%                           |
| 6    | BN, AN  | 5,643                 | 8.0%                            |
| 7    | AN, W   | 4,201                 | 5.7%                            |
| 8    | D, D  | 3,367                 | 4.4%                            |
| 9    | W, W  | 2,622                 | 3.0%                            |
| 10   | W, W  | 2,464                 | 2.4%                            |
| 11   | W, AN   | 2,199                 | 2.0%                            |
| 12   | D, D  | 2,362                 | 2.5%                            |
| 13   | W, W  | 2,840                 | 3.3%                            |
| 14   | D, D  | 2,923                 | 3.4%                            |
| 15   | C, C  | 4,340                 | 5.5%                            |
| 16   | D, C  | 5,863                 | 8.4%                            |
| 17   | C, C  | 4,510                 | 6.6%                            |
| 18   | C, C  | 15,736                | 31.6%                           |
| 19   | C, C  | 17,499                | 44.1%                           |
| 20   | AN, W   | 6,905                 | 15.4%                           |
| 21   | C, C  | 6,768                 | 10.2%                           |
| 22   | W, W  | 9,422                 | 16.3%                           |
| 23   | W, W  | 6,739                 | 8.7%                            |
| 24   | W, W  | 5,679                 | 6.5%                            |
| 25   | W, W  | 4,911                 | 5.6%                            |
| 26   | W, AN   | 4,455                 | 4.3%                            |
| 27   | AN, AN  | 4,309                 | 4.7%                            |
| 28   | D, D  | 4,076                 | 4.6%                            |
| 29   | D, D  | 4,221                 | 5.0%                            |
| 30   | AN, BN  | 3,392                 | 3.9%                            |
| 31   | BN, D   | 2,880                 | 3.1%                            |
| 32   | AN, W   | 2,468                 | 2.7%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 2,211                 | 2.2%                            |
| 34             | D, C  | 2,050                 | 2.1%                            |
| 35             | C, C  | 2,902                 | 3.3%                            |
| 36             | D, BN   | 4,647                 | 6.1%                            |
| 37             | BN, AN  | 3,376                 | 4.6%                            |
| 38             | W, W  | 2,916                 | 3.3%                            |
| 39             | BN, D   | 2,588                 | 2.9%                            |
| 40             | D, C  | 2,960                 | 3.5%                            |
| 41             | C, C  | 17,453                | 24.8%                           |
| 42             | C, C  | 17,033                | 35.1%                           |
| <b>Average</b> |   | <b>5,516</b>          | <b>8.6%</b>                     |
| <b>Maximum</b> |   | <b>17,499</b>         | <b>44.1%</b>                    |
| <b>Minimum</b> |   | <b>976</b>            | <b>1.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-235. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 4 (SR4) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 6,719                 | 1.6%                            |
| 2    | W, W  | 520                   | 0.1%                            |
| 3    | C, C  | 53                    | 0.0%                            |
| 4    | C, C  | 49,937                | 17.2%                           |
| 5    | AN, W   | 23,755                | 7.7%                            |
| 6    | BN, AN  | 22,822                | 5.9%                            |
| 7    | AN, W   | 2,441                 | 0.6%                            |
| 8    | D, D  | 3,943                 | 1.1%                            |
| 9    | W, W  | 10,303                | 2.3%                            |
| 10   | W, W  | 5,163                 | 1.1%                            |
| 11   | W, AN   | -2,705                | -0.6%                           |
| 12   | D, D  | 8,510                 | 2.2%                            |
| 13   | W, W  | 6,311                 | 1.4%                            |
| 14   | D, D  | 6,842                 | 2.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 629                   | 0.2%                            |
| 16             | D, C  | 16,811                | 5.1%                            |
| 17             | C, C  | 3,267                 | 0.9%                            |
| 18             | C, C  | 35,882                | 11.3%                           |
| 19             | C, C  | 60,062                | 20.9%                           |
| 20             | AN, W   | 17,494                | 4.9%                            |
| 21             | C, C  | 10,856                | 3.2%                            |
| 22             | W, W  | 16,801                | 4.4%                            |
| 23             | W, W  | 9,149                 | 2.5%                            |
| 24             | W, W  | 15,017                | 3.8%                            |
| 25             | W, W  | 7,736                 | 1.9%                            |
| 26             | W, AN   | -853                  | -0.2%                           |
| 27             | AN, AN  | 14,468                | 3.7%                            |
| 28             | D, D  | 14,163                | 3.6%                            |
| 29             | D, D  | 4,795                 | 1.2%                            |
| 30             | AN, BN  | 4,067                 | 1.0%                            |
| 31             | BN, D   | 1,933                 | 0.5%                            |
| 32             | AN, W   | 6,747                 | 1.5%                            |
| 33             | W, W  | 8,792                 | 2.0%                            |
| 34             | D, C  | -1,254                | -0.3%                           |
| 35             | C, C  | 4,687                 | 1.2%                            |
| 36             | D, BN   | 8,036                 | 2.2%                            |
| 37             | BN, AN  | 6,752                 | 1.8%                            |
| 38             | W, W  | 7,456                 | 1.8%                            |
| 39             | BN, D   | 1,078                 | 0.3%                            |
| 40             | D, C  | 7,744                 | 2.1%                            |
| 41             | C, C  | 41,222                | 12.0%                           |
| 42             | C, C  | 46,519                | 15.3%                           |
| <b>Average</b> |   | <b>12,254</b>         | <b>3.6%</b>                     |
| <b>Maximum</b> |   | <b>60,062</b>         | <b>20.9%</b>                    |
| <b>Minimum</b> |   | <b>-2,705</b>         | <b>-0.6%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-236. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 5 (SR5) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -1,086                | -0.3%                           |
| 2    | W, W  | -836                  | -0.2%                           |
| 3    | C, C  | 854                   | 0.2%                            |
| 4    | C, C  | -8,099                | -3.4%                           |
| 5    | AN, W   | 10,244                | 6.4%                            |
| 6    | BN, AN  | -4,522                | -1.4%                           |
| 7    | AN, W   | 5,190                 | 1.4%                            |
| 8    | D, D  | -4,972                | -1.4%                           |
| 9    | W, W  | 4,560                 | 1.1%                            |
| 10   | W, W  | 3,354                 | 0.6%                            |
| 11   | W, AN   | -1,790                | -0.4%                           |
| 12   | D, D  | -2,315                | -0.5%                           |
| 13   | W, W  | 8,006                 | 1.9%                            |
| 14   | D, D  | -2,210                | -0.6%                           |
| 15   | C, C  | 3,015                 | 1.0%                            |
| 16   | D, C  | 928                   | 0.3%                            |
| 17   | C, C  | -2,144                | -0.6%                           |
| 18   | C, C  | 3,697                 | 1.5%                            |
| 19   | C, C  | -6,775                | -3.0%                           |
| 20   | AN, W   | 15,285                | 5.8%                            |
| 21   | C, C  | -164                  | 0.0%                            |
| 22   | W, W  | 6,055                 | 1.8%                            |
| 23   | W, W  | 2,669                 | 0.7%                            |
| 24   | W, W  | -239                  | -0.1%                           |
| 25   | W, W  | 207                   | 0.0%                            |
| 26   | W, AN   | 556                   | 0.1%                            |
| 27   | AN, AN  | -654                  | -0.2%                           |
| 28   | D, D  | -3,925                | -0.9%                           |
| 29   | D, D  | 8,266                 | 2.2%                            |
| 30   | AN, BN  | -852                  | -0.3%                           |
| 31   | BN, D   | 494                   | 0.1%                            |
| 32   | AN, W   | 3,626                 | 0.8%                            |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -2,620                | -0.5%                           |
| 34             | D, C  | 11,248                | 2.7%                            |
| 35             | C, C  | -2,453                | -0.6%                           |
| 36             | D, BN   | 5,154                 | 1.7%                            |
| 37             | BN, AN  | 5,229                 | 1.7%                            |
| 38             | W, W  | -2,659                | -0.6%                           |
| 39             | BN, D   | -575                  | -0.2%                           |
| 40             | D, C  | 1,711                 | 0.5%                            |
| 41             | C, C  | 6,797                 | 2.4%                            |
| 42             | C, C  | 8,459                 | 4.0%                            |
| <b>Average</b> |   | <b>1,588</b>          | <b>0.6%</b>                     |
| <b>Maximum</b> |   | <b>15,285</b>         | <b>6.4%</b>                     |
| <b>Minimum</b> |   | <b>-8,099</b>         | <b>-3.4%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-237. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 6 (SR6) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 1,000                 | 1.8%                            |
| 2    | W, W  | 310                   | 0.4%                            |
| 3    | C, C  | 208                   | 0.2%                            |
| 4    | C, C  | -2,053                | -1.5%                           |
| 5    | AN, W   | -2,534                | -1.1%                           |
| 6    | BN, AN  | -494                  | -0.3%                           |
| 7    | AN, W   | 1,293                 | 1.2%                            |
| 8    | D, D  | -1,500                | -1.0%                           |
| 9    | W, W  | 2,380                 | 4.0%                            |
| 10   | W, W  | 263                   | 1.2%                            |
| 11   | W, AN   | -1,333                | -4.7%                           |
| 12   | D, D  | 1,260                 | 1.8%                            |
| 13   | W, W  | 2,118                 | 4.6%                            |
| 14   | D, D  | 97                    | 0.1%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | -459                  | -0.4%                           |
| 16             | D, C  | 2,603                 | 1.7%                            |
| 17             | C, C  | -2,066                | -1.7%                           |
| 18             | C, C  | -6,115                | -3.5%                           |
| 19             | C, C  | -1,342                | -0.7%                           |
| 20             | AN, W   | -802                  | -0.3%                           |
| 21             | C, C  | -1,034                | -0.6%                           |
| 22             | W, W  | 1,901                 | 1.0%                            |
| 23             | W, W  | 80                    | 0.1%                            |
| 24             | W, W  | 851                   | 0.8%                            |
| 25             | W, W  | 170                   | 0.3%                            |
| 26             | W, AN   | -704                  | -1.2%                           |
| 27             | AN, AN  | 843                   | 1.0%                            |
| 28             | D, D  | 927                   | 1.0%                            |
| 29             | D, D  | 1,013                 | 1.0%                            |
| 30             | AN, BN  | 318                   | 0.3%                            |
| 31             | BN, D   | 165                   | 0.2%                            |
| 32             | AN, W   | 1,093                 | 1.6%                            |
| 33             | W, W  | 64                    | 0.2%                            |
| 34             | D, C  | 503                   | 0.5%                            |
| 35             | C, C  | -760                  | -0.8%                           |
| 36             | D, BN   | 1,220                 | 1.0%                            |
| 37             | BN, AN  | 1,677                 | 1.2%                            |
| 38             | W, W  | 222                   | 0.3%                            |
| 39             | BN, D   | -359                  | -0.3%                           |
| 40             | D, C  | 475                   | 0.3%                            |
| 41             | C, C  | -3,427                | -2.5%                           |
| 42             | C, C  | -643                  | -0.3%                           |
| <b>Average</b> |   | <b>-61</b>            | <b>0.2%</b>                     |
| <b>Maximum</b> |   | <b>2,603</b>          | <b>4.6%</b>                     |
| <b>Minimum</b> |   | <b>-6,115</b>         | <b>-4.7%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-238. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 7 (SR7) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -979                  | -6.8%                           |
| 2    | W, W  | -116                  | -0.5%                           |
| 3    | C, C  | 485                   | 2.8%                            |
| 4    | C, C  | -5,696                | -18.4%                          |
| 5    | AN, W   | -441                  | -1.0%                           |
| 6    | BN, AN  | -1,801                | -73.1%                          |
| 7    | AN, W   | 127                   | 1.6%                            |
| 8    | D, D  | 582                   | 8.1%                            |
| 9    | W, W  | -182                  | -4.3%                           |
| 10   | W, W  | 37                    | 0.1%                            |
| 11   | W, AN   | -667                  | -2.0%                           |
| 12   | D, D  | -740                  | -2.3%                           |
| 13   | W, W  | 806                   | 2.3%                            |
| 14   | D, D  | 307                   | 2.5%                            |
| 15   | C, C  | -1,218                | -116.0%                         |
| 16   | D, C  | 1,267                 | 7.0%                            |
| 17   | C, C  | -1,379                | -67.4%                          |
| 18   | C, C  | -6,358                | -28.1%                          |
| 19   | C, C  | 4,134                 | 15.6%                           |
| 20   | AN, W   | -2,013                | -7.3%                           |
| 21   | C, C  | -2,838                | -39.1%                          |
| 22   | W, W  | -204                  | -0.8%                           |
| 23   | W, W  | -900                  | -5.2%                           |
| 24   | W, W  | -18                   | -0.2%                           |
| 25   | W, W  | 86                    | 1.0%                            |
| 26   | W, AN   | 73                    | 0.5%                            |
| 27   | AN, AN  | 1,144                 | 10.7%                           |
| 28   | D, D  | -988                  | -6.0%                           |
| 29   | D, D  | 841                   | 1445.5%                         |
| 30   | AN, BN  | -495                  | -3.4%                           |
| 31   | BN, D   | 426                   | 9.2%                            |
| 32   | AN, W   | -289                  | -14.3%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -986                  | -21.2%                          |
| 34             | D, C  | 2,490                 | 94.3%                           |
| 35             | C, C  | -2,840                | -107.4%                         |
| 36             | D, BN   | 1,193                 | 4.9%                            |
| 37             | BN, AN  | 257                   | 1.4%                            |
| 38             | W, W  | -218                  | -2.5%                           |
| 39             | BN, D   | 224                   | 2.3%                            |
| 40             | D, C  | 266                   | 6.0%                            |
| 41             | C, C  | -4,115                | -14.0%                          |
| 42             | C, C  | 4,287                 | 10.2%                           |
| <b>Average</b> |   | <b>-392</b>           | <b>25.8%</b>                    |
| <b>Maximum</b> |   | <b>4,287</b>          | <b>1445.5%</b>                  |
| <b>Minimum</b> |   | <b>-6,358</b>         | <b>-116.0%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-239. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 8 (SR8) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -509                  | -0.2%                           |
| 2    | W, W  | -121                  | -0.1%                           |
| 3    | C, C  | 222                   | 0.1%                            |
| 4    | C, C  | -1,908                | -1.0%                           |
| 5    | AN, W   | 923                   | 0.3%                            |
| 6    | BN, AN  | -46                   | 0.0%                            |
| 7    | AN, W   | -614                  | -0.2%                           |
| 8    | D, D  | 1,453                 | 0.6%                            |
| 9    | W, W  | -250                  | -0.1%                           |
| 10   | W, W  | 104                   | 0.0%                            |
| 11   | W, AN   | 311                   | 0.2%                            |
| 12   | D, D  | -503                  | -0.3%                           |
| 13   | W, W  | -251                  | -0.1%                           |
| 14   | D, D  | 379                   | 0.2%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | -876                  | -0.4%                           |
| 16             | D, C  | 571                   | 0.2%                            |
| 17             | C, C  | 5                     | 0.0%                            |
| 18             | C, C  | -2,225                | -0.9%                           |
| 19             | C, C  | 4,054                 | 1.5%                            |
| 20             | AN, W   | -1,113                | -0.4%                           |
| 21             | C, C  | -1,285                | -0.5%                           |
| 22             | W, W  | 171                   | 0.0%                            |
| 23             | W, W  | -608                  | -0.2%                           |
| 24             | W, W  | 240                   | 0.1%                            |
| 25             | W, W  | -4                    | 0.0%                            |
| 26             | W, AN   | -83                   | 0.0%                            |
| 27             | AN, AN  | 969                   | 0.4%                            |
| 28             | D, D  | -589                  | -0.3%                           |
| 29             | D, D  | 73                    | 0.0%                            |
| 30             | AN, BN  | -67                   | 0.0%                            |
| 31             | BN, D   | 329                   | 0.2%                            |
| 32             | AN, W   | -791                  | -0.3%                           |
| 33             | W, W  | 354                   | 0.1%                            |
| 34             | D, C  | 994                   | 0.4%                            |
| 35             | C, C  | -1,432                | -0.6%                           |
| 36             | D, BN   | 468                   | 0.2%                            |
| 37             | BN, AN  | -287                  | -0.1%                           |
| 38             | W, W  | 48                    | 0.0%                            |
| 39             | BN, D   | 301                   | 0.1%                            |
| 40             | D, C  | -24                   | 0.0%                            |
| 41             | C, C  | -875                  | -0.4%                           |
| 42             | C, C  | 4,073                 | 1.6%                            |
| <b>Average</b> |   | <b>38</b>             | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>4,073</b>          | <b>1.6%</b>                     |
| <b>Minimum</b> |   | <b>-2,225</b>         | <b>-1.0%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-240. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 9 (SR9) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 835                   | 0.3%                            |
| 2    | W, W  | -1,475                | -0.4%                           |
| 3    | C, C  | -1,791                | -0.4%                           |
| 4    | C, C  | -3,820                | -1.1%                           |
| 5    | AN, W   | -1,962                | -1.1%                           |
| 6    | BN, AN  | -930                  | -0.3%                           |
| 7    | AN, W   | 1,969                 | 0.7%                            |
| 8    | D, D  | -723                  | -0.2%                           |
| 9    | W, W  | 3,688                 | 1.4%                            |
| 10   | W, W  | 25                    | 0.0%                            |
| 11   | W, AN   | -4,160                | -0.9%                           |
| 12   | D, D  | 2,395                 | 0.5%                            |
| 13   | W, W  | 1,380                 | 0.4%                            |
| 14   | D, D  | -177                  | 0.0%                            |
| 15   | C, C  | -7,124                | -1.8%                           |
| 16   | D, C  | 7,031                 | 2.2%                            |
| 17   | C, C  | 5,566                 | 1.4%                            |
| 18   | C, C  | 4,349                 | 1.3%                            |
| 19   | C, C  | 20,649                | 6.9%                            |
| 20   | AN, W   | -15,534               | -7.5%                           |
| 21   | C, C  | -5,950                | -1.6%                           |
| 22   | W, W  | -743                  | -0.4%                           |
| 23   | W, W  | -3,099                | -1.0%                           |
| 24   | W, W  | 1,222                 | 0.3%                            |
| 25   | W, W  | -610                  | -0.2%                           |
| 26   | W, AN   | -4,209                | -1.0%                           |
| 27   | AN, AN  | 3,648                 | 0.9%                            |
| 28   | D, D  | 112                   | 0.0%                            |
| 29   | D, D  | 2,159                 | 0.6%                            |
| 30   | AN, BN  | -1,671                | -0.5%                           |
| 31   | BN, D   | -1,074                | -0.3%                           |
| 32   | AN, W   | 823                   | 0.2%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -2,269                | -0.6%                           |
| 34             | D, C  | 4,460                 | 1.0%                            |
| 35             | C, C  | -6,173                | -1.4%                           |
| 36             | D, BN   | 2,305                 | 0.6%                            |
| 37             | BN, AN  | 3,812                 | 1.1%                            |
| 38             | W, W  | -2,479                | -0.8%                           |
| 39             | BN, D   | -1,770                | -0.4%                           |
| 40             | D, C  | 1,220                 | 0.3%                            |
| 41             | C, C  | -2,051                | -0.5%                           |
| 42             | C, C  | 16,901                | 5.0%                            |
| <b>Average</b> |   | <b>351</b>            | <b>0.1%</b>                     |
| <b>Maximum</b> |   | <b>20,649</b>         | <b>6.9%</b>                     |
| <b>Minimum</b> |   | <b>-15,534</b>        | <b>-7.5%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-241. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 10 (SR10) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -2,693                | -3.1%                           |
| 2    | W, W  | -580                  | -0.6%                           |
| 3    | C, C  | -627                  | -0.7%                           |
| 4    | C, C  | -23,394               | -104.3%                         |
| 5    | AN, W   | -13,822               | -82.1%                          |
| 6    | BN, AN  | -4,754                | -7.0%                           |
| 7    | AN, W   | -3,343                | -7.7%                           |
| 8    | D, D  | -2,193                | -2.6%                           |
| 9    | W, W  | -1,628                | -2.3%                           |
| 10   | W, W  | -1,158                | -1.4%                           |
| 11   | W, AN   | -852                  | -0.7%                           |
| 12   | D, D  | -1,452                | -1.2%                           |
| 13   | W, W  | -750                  | -0.9%                           |
| 14   | D, D  | -917                  | -0.8%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | -694                  | -0.7%                           |
| 16             | D, C  | 608                   | 0.8%                            |
| 17             | C, C  | 1,079                 | 1.8%                            |
| 18             | C, C  | -1,502                | -27.3%                          |
| 19             | C, C  | -1,944                | -16.3%                          |
| 20             | AN, W   | -58                   | -0.3%                           |
| 21             | C, C  | -2,769                | -8.6%                           |
| 22             | W, W  | -436                  | -7.3%                           |
| 23             | W, W  | 1,068                 | 1.9%                            |
| 24             | W, W  | 89                    | 0.1%                            |
| 25             | W, W  | -1,512                | -2.0%                           |
| 26             | W, AN   | -1,049                | -0.8%                           |
| 27             | AN, AN  | -764                  | -0.7%                           |
| 28             | D, D  | -745                  | -0.7%                           |
| 29             | D, D  | -960                  | -1.0%                           |
| 30             | AN, BN  | -136                  | -0.1%                           |
| 31             | BN, D   | 29                    | 0.0%                            |
| 32             | AN, W   | -681                  | -0.7%                           |
| 33             | W, W  | -1,441                | -1.2%                           |
| 34             | D, C  | -448                  | -0.4%                           |
| 35             | C, C  | -870                  | -1.0%                           |
| 36             | D, BN   | -207                  | -0.2%                           |
| 37             | BN, AN  | 59                    | 0.1%                            |
| 38             | W, W  | 1,094                 | 1.0%                            |
| 39             | BN, D   | 448                   | 0.3%                            |
| 40             | D, C  | -1,491                | -1.3%                           |
| 41             | C, C  | -15,129               | -31.8%                          |
| 42             | C, C  | -11,014               | -131.2%                         |
| <b>Average</b> |   | <b>-2,322</b>         | <b>-10.6%</b>                   |
| <b>Maximum</b> |   | <b>1,094</b>          | <b>1.9%</b>                     |
| <b>Minimum</b> |   | <b>-23,394</b>        | <b>-131.2%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-242. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 11 (SR11) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -999                  | -2.4%                           |
| 2    | W, W  | -687                  | -1.5%                           |
| 3    | C, C  | -681                  | -3.4%                           |
| 4    | C, C  | 17,972                | 18.8%                           |
| 5    | AN, W   | -12,374               | -17.2%                          |
| 6    | BN, AN  | -434                  | -1.4%                           |
| 7    | AN, W   | -1,085                | -14.5%                          |
| 8    | D, D  | -76                   | -0.4%                           |
| 9    | W, W  | -1,224                | -6.3%                           |
| 10   | W, W  | -1,034                | -3.3%                           |
| 11   | W, AN   | -325                  | -0.3%                           |
| 12   | D, D  | -796                  | -1.1%                           |
| 13   | W, W  | -2,516                | -4.8%                           |
| 14   | D, D  | 1,485                 | 3.8%                            |
| 15   | C, C  | 289                   | 1.3%                            |
| 16   | D, C  | 128                   | 0.2%                            |
| 17   | C, C  | -663                  | -1.0%                           |
| 18   | C, C  | 1,739                 | 2.1%                            |
| 19   | C, C  | -576                  | -0.7%                           |
| 20   | AN, W   | -2,918                | -6.7%                           |
| 21   | C, C  | -3,762                | -8.2%                           |
| 22   | W, W  | -2,571                | -6.6%                           |
| 23   | W, W  | -683                  | -6.6%                           |
| 24   | W, W  | -4,114                | -19.6%                          |
| 25   | W, W  | 6,102                 | 13.7%                           |
| 26   | W, AN   | 1,614                 | 1.5%                            |
| 27   | AN, AN  | -845                  | -1.7%                           |
| 28   | D, D  | 922                   | 2.0%                            |
| 29   | D, D  | 144                   | 0.4%                            |
| 30   | AN, BN  | 177                   | 0.5%                            |
| 31   | BN, D   | 103                   | 0.3%                            |
| 32   | AN, W   | 4,517                 | 8.9%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -3,617                | -5.5%                           |
| 34             | D, C  | 695                   | 1.0%                            |
| 35             | C, C  | -75                   | -1.6%                           |
| 36             | D, BN   | 61                    | 0.3%                            |
| 37             | BN, AN  | 289                   | 3.9%                            |
| 38             | W, W  | 137                   | 30.0%                           |
| 39             | BN, D   | 84                    | 0.1%                            |
| 40             | D, C  | 136                   | 1.0%                            |
| 41             | C, C  | 17,056                | 27.6%                           |
| 42             | C, C  | -13,296               | -14.6%                          |
| <b>Average</b> |   | <b>-41</b>            | <b>-0.3%</b>                    |
| <b>Maximum</b> |   | <b>17,972</b>         | <b>30.0%</b>                    |
| <b>Minimum</b> |   | <b>-13,296</b>        | <b>-19.6%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-243. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 12 (SR12) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -666                  | -0.8%                           |
| 2    | W, W  | -448                  | -0.6%                           |
| 3    | C, C  | -241                  | -0.2%                           |
| 4    | C, C  | -701                  | -0.4%                           |
| 5    | AN, W   | -851                  | -0.5%                           |
| 6    | BN, AN  | -158                  | -0.1%                           |
| 7    | AN, W   | -130                  | -0.1%                           |
| 8    | D, D  | -47                   | 0.0%                            |
| 9    | W, W  | 15                    | 0.0%                            |
| 10   | W, W  | -13                   | 0.0%                            |
| 11   | W, AN   | 26                    | 0.0%                            |
| 12   | D, D  | -195                  | -0.3%                           |
| 13   | W, W  | -255                  | -0.3%                           |
| 14   | D, D  | -30                   | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 38                    | 0.0%                            |
| 16             | D, C  | 76                    | 0.0%                            |
| 17             | C, C  | -554                  | -0.3%                           |
| 18             | C, C  | 1,919                 | 0.8%                            |
| 19             | C, C  | -382                  | -0.2%                           |
| 20             | AN, W   | -1,708                | -0.8%                           |
| 21             | C, C  | -1,015                | -0.5%                           |
| 22             | W, W  | -95                   | -0.1%                           |
| 23             | W, W  | 303                   | 0.3%                            |
| 24             | W, W  | 156                   | 0.1%                            |
| 25             | W, W  | 18                    | 0.0%                            |
| 26             | W, AN   | -87                   | -0.2%                           |
| 27             | AN, AN  | -104                  | -0.1%                           |
| 28             | D, D  | -119                  | -0.1%                           |
| 29             | D, D  | -94                   | -0.1%                           |
| 30             | AN, BN  | 47                    | 0.0%                            |
| 31             | BN, D   | 91                    | 0.1%                            |
| 32             | AN, W   | -19                   | 0.0%                            |
| 33             | W, W  | -69                   | -0.1%                           |
| 34             | D, C  | -172                  | -0.2%                           |
| 35             | C, C  | -629                  | -0.5%                           |
| 36             | D, BN   | 236                   | 0.2%                            |
| 37             | BN, AN  | 91                    | 0.1%                            |
| 38             | W, W  | 178                   | 0.2%                            |
| 39             | BN, D   | 158                   | 0.3%                            |
| 40             | D, C  | 30                    | 0.0%                            |
| 41             | C, C  | -412                  | -0.2%                           |
| 42             | C, C  | -258                  | -0.1%                           |
| <b>Average</b> |   | <b>-145</b>           | <b>-0.1%</b>                    |
| <b>Maximum</b> |   | <b>1,919</b>          | <b>0.8%</b>                     |
| <b>Minimum</b> |   | <b>-1,708</b>         | <b>-0.8%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-244. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 13 (SR13) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 219                   | 0.0%                            |
| 2    | W, W  | -147                  | 0.0%                            |
| 3    | C, C  | 43                    | 0.0%                            |
| 4    | C, C  | -13,056               | -2.1%                           |
| 5    | AN, W   | -8,037                | -0.9%                           |
| 6    | BN, AN  | -2,496                | -0.4%                           |
| 7    | AN, W   | -1,380                | -0.2%                           |
| 8    | D, D  | -784                  | -0.1%                           |
| 9    | W, W  | -550                  | -0.1%                           |
| 10   | W, W  | -351                  | 0.0%                            |
| 11   | W, AN   | -180                  | 0.0%                            |
| 12   | D, D  | -263                  | 0.0%                            |
| 13   | W, W  | -137                  | 0.0%                            |
| 14   | D, D  | -88                   | 0.0%                            |
| 15   | C, C  | 60                    | 0.0%                            |
| 16   | D, C  | 337                   | 0.1%                            |
| 17   | C, C  | 279                   | 0.0%                            |
| 18   | C, C  | -1,081                | -0.2%                           |
| 19   | C, C  | -916                  | -0.1%                           |
| 20   | AN, W   | -111                  | 0.0%                            |
| 21   | C, C  | 294                   | 0.0%                            |
| 22   | W, W  | 172                   | 0.0%                            |
| 23   | W, W  | 438                   | 0.1%                            |
| 24   | W, W  | 245                   | 0.0%                            |
| 25   | W, W  | 156                   | 0.0%                            |
| 26   | W, AN   | 134                   | 0.0%                            |
| 27   | AN, AN  | 196                   | 0.0%                            |
| 28   | D, D  | 192                   | 0.0%                            |
| 29   | D, D  | 4                     | 0.0%                            |
| 30   | AN, BN  | 94                    | 0.0%                            |
| 31   | BN, D   | 166                   | 0.0%                            |
| 32   | AN, W   | 470                   | 0.1%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 180                   | 0.0%                            |
| 34             | D, C  | 3                     | 0.0%                            |
| 35             | C, C  | -10                   | 0.0%                            |
| 36             | D, BN   | 133                   | 0.0%                            |
| 37             | BN, AN  | 268                   | 0.0%                            |
| 38             | W, W  | 293                   | 0.0%                            |
| 39             | BN, D   | 393                   | 0.1%                            |
| 40             | D, C  | 270                   | 0.0%                            |
| 41             | C, C  | -8,358                | -1.2%                           |
| 42             | C, C  | -6,381                | -0.9%                           |
| <b>Average</b> |   | <b>-935</b>           | <b>-0.1%</b>                    |
| <b>Maximum</b> |   | <b>470</b>            | <b>0.1%</b>                     |
| <b>Minimum</b> |   | <b>-13,056</b>        | <b>-2.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-245. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 14 (SR14) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 388                   | 0.7%                            |
| 2    | W, W  | 16                    | 0.0%                            |
| 3    | C, C  | 1                     | 0.0%                            |
| 4    | C, C  | 22                    | 0.0%                            |
| 5    | AN, W   | 4                     | 0.0%                            |
| 6    | BN, AN  | 112                   | 0.2%                            |
| 7    | AN, W   | 3                     | 0.0%                            |
| 8    | D, D  | -16                   | 0.0%                            |
| 9    | W, W  | -10                   | 0.0%                            |
| 10   | W, W  | 5                     | 0.0%                            |
| 11   | W, AN   | 424                   | 0.7%                            |
| 12   | D, D  | -27                   | -0.1%                           |
| 13   | W, W  | -112                  | -0.1%                           |
| 14   | D, D  | -350                  | -0.8%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | -29                   | -0.1%                           |
| 16             | D, C  | 12                    | 0.0%                            |
| 17             | C, C  | -78                   | -0.2%                           |
| 18             | C, C  | -50                   | -0.1%                           |
| 19             | C, C  | 29                    | 0.1%                            |
| 20             | AN, W   | -47                   | -0.1%                           |
| 21             | C, C  | 20                    | 0.0%                            |
| 22             | W, W  | -82                   | -0.1%                           |
| 23             | W, W  | -5                    | 0.0%                            |
| 24             | W, W  | 25                    | 0.0%                            |
| 25             | W, W  | 7                     | 0.0%                            |
| 26             | W, AN   | 3                     | 0.0%                            |
| 27             | AN, AN  | -8                    | 0.0%                            |
| 28             | D, D  | -1                    | 0.0%                            |
| 29             | D, D  | 12                    | 0.0%                            |
| 30             | AN, BN  | -43                   | -0.1%                           |
| 31             | BN, D   | 20                    | 0.0%                            |
| 32             | AN, W   | -43                   | -0.1%                           |
| 33             | W, W  | 150                   | 0.3%                            |
| 34             | D, C  | 4                     | 0.0%                            |
| 35             | C, C  | -7                    | 0.0%                            |
| 36             | D, BN   | -17                   | 0.0%                            |
| 37             | BN, AN  | -88                   | -0.2%                           |
| 38             | W, W  | -6                    | 0.0%                            |
| 39             | BN, D   | 51                    | 0.1%                            |
| 40             | D, C  | 118                   | 0.3%                            |
| 41             | C, C  | -38                   | -0.1%                           |
| 42             | C, C  | 74                    | 0.2%                            |
| <b>Average</b> |   | <b>11</b>             | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>424</b>            | <b>0.7%</b>                     |
| <b>Minimum</b> |   | <b>-350</b>           | <b>-0.8%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-246. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 15 (SR15) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -1,154                | -0.2%                           |
| 2    | W, W  | -422                  | -0.1%                           |
| 3    | C, C  | -484                  | -0.1%                           |
| 4    | C, C  | -2,316                | -0.5%                           |
| 5    | AN, W   | -2,980                | -0.3%                           |
| 6    | BN, AN  | -889                  | -0.2%                           |
| 7    | AN, W   | -273                  | 0.0%                            |
| 8    | D, D  | -842                  | -0.2%                           |
| 9    | W, W  | 221                   | 0.0%                            |
| 10   | W, W  | 642                   | 0.1%                            |
| 11   | W, AN   | 84                    | 0.0%                            |
| 12   | D, D  | -888                  | -0.2%                           |
| 13   | W, W  | 374                   | 0.1%                            |
| 14   | D, D  | 294                   | 0.1%                            |
| 15   | C, C  | 1,664                 | 0.5%                            |
| 16   | D, C  | 1,800                 | 0.4%                            |
| 17   | C, C  | 1,133                 | 0.3%                            |
| 18   | C, C  | 342                   | 0.1%                            |
| 19   | C, C  | 26                    | 0.0%                            |
| 20   | AN, W   | -233                  | 0.0%                            |
| 21   | C, C  | -237                  | 0.0%                            |
| 22   | W, W  | 1,855                 | 0.2%                            |
| 23   | W, W  | 466                   | 0.1%                            |
| 24   | W, W  | -1,962                | -0.3%                           |
| 25   | W, W  | -711                  | -0.1%                           |
| 26   | W, AN   | -475                  | -0.1%                           |
| 27   | AN, AN  | -1,563                | -0.4%                           |
| 28   | D, D  | -1,096                | -0.3%                           |
| 29   | D, D  | -476                  | -0.1%                           |
| 30   | AN, BN  | -120                  | 0.0%                            |
| 31   | BN, D   | -1,437                | -0.4%                           |
| 32   | AN, W   | -1,702                | -0.3%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -460                  | -0.1%                           |
| 34             | D, C  | -1,666                | -0.4%                           |
| 35             | C, C  | -1,555                | -0.4%                           |
| 36             | D, BN   | -724                  | -0.2%                           |
| 37             | BN, AN  | -165                  | 0.0%                            |
| 38             | W, W  | 103                   | 0.0%                            |
| 39             | BN, D   | -291                  | -0.1%                           |
| 40             | D, C  | 401                   | 0.1%                            |
| 41             | C, C  | -176                  | 0.0%                            |
| 42             | C, C  | -2,982                | -0.6%                           |
| <b>Average</b> |   | <b>-449</b>           | <b>-0.1%</b>                    |
| <b>Maximum</b> |   | <b>1,855</b>          | <b>0.5%</b>                     |
| <b>Minimum</b> |   | <b>-2,982</b>         | <b>-0.6%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-247. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 16 (SR16) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 116                   | 0.3%                            |
| 2    | W, W  | 38                    | 0.1%                            |
| 3    | C, C  | 42                    | 0.1%                            |
| 4    | C, C  | 43                    | 0.1%                            |
| 5    | AN, W   | 104                   | 0.2%                            |
| 6    | BN, AN  | 88                    | 0.2%                            |
| 7    | AN, W   | 105                   | 0.3%                            |
| 8    | D, D  | 87                    | 0.2%                            |
| 9    | W, W  | 108                   | 0.3%                            |
| 10   | W, W  | 95                    | 0.3%                            |
| 11   | W, AN   | 94                    | 0.6%                            |
| 12   | D, D  | 95                    | 0.4%                            |
| 13   | W, W  | 80                    | 0.3%                            |
| 14   | D, D  | 113                   | 0.4%                            |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | -25                   | -0.1%                           |
| 16             | D, C  | 121                   | 0.2%                            |
| 17             | C, C  | 141                   | 0.2%                            |
| 18             | C, C  | 87                    | 0.1%                            |
| 19             | C, C  | 144                   | 0.2%                            |
| 20             | AN, W   | 134                   | 0.2%                            |
| 21             | C, C  | 140                   | 0.2%                            |
| 22             | W, W  | 176                   | 0.4%                            |
| 23             | W, W  | 208                   | 0.5%                            |
| 24             | W, W  | 149                   | 0.4%                            |
| 25             | W, W  | 145                   | 0.5%                            |
| 26             | W, AN   | 139                   | 0.6%                            |
| 27             | AN, AN  | 118                   | 0.4%                            |
| 28             | D, D  | 113                   | 0.3%                            |
| 29             | D, D  | 121                   | 0.2%                            |
| 30             | AN, BN  | 92                    | 0.2%                            |
| 31             | BN, D   | 136                   | 0.3%                            |
| 32             | AN, W   | 142                   | 0.3%                            |
| 33             | W, W  | 134                   | 0.5%                            |
| 34             | D, C  | 85                    | 0.2%                            |
| 35             | C, C  | 54                    | 0.1%                            |
| 36             | D, BN   | 136                   | 0.2%                            |
| 37             | BN, AN  | 151                   | 0.3%                            |
| 38             | W, W  | 184                   | 0.6%                            |
| 39             | BN, D   | 135                   | 0.3%                            |
| 40             | D, C  | 133                   | 0.2%                            |
| 41             | C, C  | 215                   | 0.2%                            |
| 42             | C, C  | 3                     | 0.0%                            |
| <b>Average</b> |   | <b>112</b>            | <b>0.3%</b>                     |
| <b>Maximum</b> |   | <b>215</b>            | <b>0.6%</b>                     |
| <b>Minimum</b> |   | <b>-25</b>            | <b>-0.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-248. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 17 (SR17) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 36                    | 0.2%                            |
| 2    | W, W  | 45                    | 0.1%                            |
| 3    | C, C  | 70                    | 0.1%                            |
| 4    | C, C  | 20                    | 0.0%                            |
| 5    | AN, W   | 104                   | 0.1%                            |
| 6    | BN, AN  | 81                    | 1.1%                            |
| 7    | AN, W   | 86                    | 0.3%                            |
| 8    | D, D  | 126                   | 1.1%                            |
| 9    | W, W  | 90                    | 0.3%                            |
| 10   | W, W  | 101                   | 0.2%                            |
| 11   | W, AN   | -11                   | 0.0%                            |
| 12   | D, D  | 52                    | 0.7%                            |
| 13   | W, W  | 33                    | 0.2%                            |
| 14   | D, D  | 106                   | 1.7%                            |
| 15   | C, C  | 42                    | 0.1%                            |
| 16   | D, C  | 19                    | 0.0%                            |
| 17   | C, C  | 7                     | 0.0%                            |
| 18   | C, C  | 23                    | 0.0%                            |
| 19   | C, C  | 5                     | 0.0%                            |
| 20   | AN, W   | 75                    | 0.1%                            |
| 21   | C, C  | 84                    | 0.1%                            |
| 22   | W, W  | 146                   | 0.2%                            |
| 23   | W, W  | 136                   | 0.4%                            |
| 24   | W, W  | 194                   | 1.3%                            |
| 25   | W, W  | 117                   | 5.1%                            |
| 26   | W, AN   | 158                   | 0.8%                            |
| 27   | AN, AN  | 159                   | 0.9%                            |
| 28   | D, D  | 87                    | 0.2%                            |
| 29   | D, D  | 43                    | 0.1%                            |
| 30   | AN, BN  | 98                    | 0.1%                            |
| 31   | BN, D   | 91                    | 0.1%                            |
| 32   | AN, W   | 113                   | 0.2%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 177                   | 0.6%                            |
| 34             | D, C  | 223                   | 0.3%                            |
| 35             | C, C  | 92                    | 0.1%                            |
| 36             | D, BN   | 104                   | 0.1%                            |
| 37             | BN, AN  | 187                   | 0.1%                            |
| 38             | W, W  | 248                   | 0.3%                            |
| 39             | BN, D   | 162                   | 0.3%                            |
| 40             | D, C  | 79                    | 0.1%                            |
| 41             | C, C  | 68                    | 0.1%                            |
| 42             | C, C  | 4                     | 0.0%                            |
| <b>Average</b> |   | <b>92</b>             | <b>0.4%</b>                     |
| <b>Maximum</b> |   | <b>248</b>            | <b>5.1%</b>                     |
| <b>Minimum</b> |   | <b>-11</b>            | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-249. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 18 (SR18) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -1,928                | -3.4%                           |
| 2    | W, W  | -1,729                | -2.4%                           |
| 3    | C, C  | -1,108                | -3.4%                           |
| 4    | C, C  | -504                  | -1.2%                           |
| 5    | AN, W   | -881                  | -0.7%                           |
| 6    | BN, AN  | -3,242                | -1.6%                           |
| 7    | AN, W   | -2,154                | -0.9%                           |
| 8    | D, D  | -2,254                | -0.8%                           |
| 9    | W, W  | -2,114                | -0.7%                           |
| 10   | W, W  | -2,436                | -0.2%                           |
| 11   | W, AN   | -2,240                | -0.2%                           |
| 12   | D, D  | -5,286                | -0.8%                           |
| 13   | W, W  | -3,858                | -0.5%                           |
| 14   | D, D  | -3,402                | -0.5%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | -2,745                | -0.7%                           |
| 16             | D, C  | -2,395                | -1.5%                           |
| 17             | C, C  | -1,566                | -26.5%                          |
| 18             | C, C  | -1,003                | -1.9%                           |
| 19             | C, C  | -508                  | -0.7%                           |
| 20             | AN, W   | -420                  | -0.4%                           |
| 21             | C, C  | -431                  | -5.0%                           |
| 22             | W, W  | -1,658                | -5.5%                           |
| 23             | W, W  | -2,232                | -0.7%                           |
| 24             | W, W  | -19,820               | -8.8%                           |
| 25             | W, W  | -10,928               | -2.2%                           |
| 26             | W, AN   | -7,596                | -0.9%                           |
| 27             | AN, AN  | -7,512                | -1.3%                           |
| 28             | D, D  | -6,787                | -1.5%                           |
| 29             | D, D  | -6,605                | -3.1%                           |
| 30             | AN, BN  | -6,316                | -8.5%                           |
| 31             | BN, D   | -4,537                | -12.7%                          |
| 32             | AN, W   | -5,538                | -8.0%                           |
| 33             | W, W  | -6,414                | -3.4%                           |
| 34             | D, C  | -5,432                | -3.4%                           |
| 35             | C, C  | -2,679                | -5.3%                           |
| 36             | D, BN   | -1,343                | -1.7%                           |
| 37             | BN, AN  | -1,456                | -1.7%                           |
| 38             | W, W  | -10,441               | -4.5%                           |
| 39             | BN, D   | -6,968                | -2.6%                           |
| 40             | D, C  | -4,325                | -12.4%                          |
| 41             | C, C  | -942                  | -1.5%                           |
| 42             | C, C  | -631                  | -0.7%                           |
| <b>Average</b> |   | <b>-3,866</b>         | <b>-3.4%</b>                    |
| <b>Maximum</b> |   | <b>-420</b>           | <b>-0.2%</b>                    |
| <b>Minimum</b> |   | <b>-19,820</b>        | <b>-26.5%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-250. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 19 (SR19) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 0                     | 0.0%                            |
| 2    | W, W  | 0                     | 0.0%                            |
| 3    | C, C  | 0                     | 0.0%                            |
| 4    | C, C  | 0                     | 0.0%                            |
| 5    | AN, W   | 0                     | 0.0%                            |
| 6    | BN, AN  | 0                     | 0.0%                            |
| 7    | AN, W   | 0                     | 0.0%                            |
| 8    | D, D  | 0                     | 0.1%                            |
| 9    | W, W  | 0                     | 0.0%                            |
| 10   | W, W  | 0                     | 0.0%                            |
| 11   | W, AN   | -1                    | 0.0%                            |
| 12   | D, D  | -1                    | -0.1%                           |
| 13   | W, W  | -3                    | 0.0%                            |
| 14   | D, D  | -1                    | 0.0%                            |
| 15   | C, C  | 0                     | 0.0%                            |
| 16   | D, C  | 0                     | 0.0%                            |
| 17   | C, C  | 0                     | 0.0%                            |
| 18   | C, C  | 0                     | 0.0%                            |
| 19   | C, C  | 0                     | 0.0%                            |
| 20   | AN, W   | 0                     | 0.0%                            |
| 21   | C, C  | 0                     | 0.0%                            |
| 22   | W, W  | 0                     | -0.1%                           |
| 23   | W, W  | 1                     | -0.3%                           |
| 24   | W, W  | 1                     | 0.0%                            |
| 25   | W, W  | -3                    | 0.0%                            |
| 26   | W, AN   | 1                     | 0.0%                            |
| 27   | AN, AN  | 0                     | -1.1%                           |
| 28   | D, D  | 0                     | -0.1%                           |
| 29   | D, D  | 0                     | 0.0%                            |
| 30   | AN, BN  | 0                     | 0.0%                            |
| 31   | BN, D   | 0                     | 0.0%                            |
| 32   | AN, W   | -1                    | -0.1%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -1                    | -0.1%                           |
| 34             | D, C  | -1                    | 0.0%                            |
| 35             | C, C  | 0                     | 0.0%                            |
| 36             | D, BN   | 0                     | 0.0%                            |
| 37             | BN, AN  | 0                     | 0.0%                            |
| 38             | W, W  | 0                     | -0.1%                           |
| 39             | BN, D   | 0                     | -0.2%                           |
| 40             | D, C  | 0                     | 0.0%                            |
| 41             | C, C  | 0                     | 0.0%                            |
| 42             | C, C  | 0                     | 0.0%                            |
| <b>Average</b> |   | <b>0</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>1</b>              | <b>0.1%</b>                     |
| <b>Minimum</b> |   | <b>-3</b>             | <b>-1.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-251. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 20 (SR20) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 0                     | 0.0%                            |
| 2    | W, W  | 0                     | 0.0%                            |
| 3    | C, C  | 0                     | 0.0%                            |
| 4    | C, C  | 0                     | 0.0%                            |
| 5    | AN, W   | 0                     | 0.0%                            |
| 6    | BN, AN  | 0                     | 0.0%                            |
| 7    | AN, W   | 0                     | 0.0%                            |
| 8    | D, D  | 0                     | 0.0%                            |
| 9    | W, W  | 0                     | 0.0%                            |
| 10   | W, W  | 0                     | 0.0%                            |
| 11   | W, AN   | 0                     | 0.0%                            |
| 12   | D, D  | 0                     | 0.0%                            |
| 13   | W, W  | 0                     | 0.0%                            |
| 14   | D, D  | 0                     | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 0                     | 0.0%                            |
| 16             | D, C  | 0                     | 0.0%                            |
| 17             | C, C  | 0                     | 0.0%                            |
| 18             | C, C  | 0                     | 0.0%                            |
| 19             | C, C  | 0                     | 0.0%                            |
| 20             | AN, W   | 0                     | 0.0%                            |
| 21             | C, C  | 0                     | 0.0%                            |
| 22             | W, W  | 0                     | 0.0%                            |
| 23             | W, W  | 0                     | 0.0%                            |
| 24             | W, W  | 0                     | 0.0%                            |
| 25             | W, W  | 0                     | 0.0%                            |
| 26             | W, AN   | 0                     | 0.0%                            |
| 27             | AN, AN  | 0                     | 0.0%                            |
| 28             | D, D  | 1                     | 0.0%                            |
| 29             | D, D  | 1                     | 0.0%                            |
| 30             | AN, BN  | 0                     | 0.0%                            |
| 31             | BN, D   | 0                     | 0.0%                            |
| 32             | AN, W   | 0                     | 0.0%                            |
| 33             | W, W  | 1                     | 0.0%                            |
| 34             | D, C  | 1                     | 0.0%                            |
| 35             | C, C  | 0                     | 0.0%                            |
| 36             | D, BN   | 0                     | 0.0%                            |
| 37             | BN, AN  | 0                     | 0.0%                            |
| 38             | W, W  | 0                     | 0.0%                            |
| 39             | BN, D   | 0                     | 0.0%                            |
| 40             | D, C  | 0                     | 0.0%                            |
| 41             | C, C  | 0                     | 0.0%                            |
| 42             | C, C  | 0                     | 0.0%                            |
| <b>Average</b> |   | <b>0</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>1</b>              | <b>0.0%</b>                     |
| <b>Minimum</b> |   | <b>0</b>              | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-252. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 21 (SR21) for Alternative 2 Without TUCP Without VA wTUCP Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 0                     | 0.0%                            |
| 2    | W, W  | 0                     | 0.0%                            |
| 3    | C, C  | 0                     | 0.0%                            |
| 4    | C, C  | 0                     | 0.0%                            |
| 5    | AN, W   | 0                     | 0.0%                            |
| 6    | BN, AN  | 0                     | 0.0%                            |
| 7    | AN, W   | 0                     | 0.0%                            |
| 8    | D, D  | 0                     | 0.0%                            |
| 9    | W, W  | 0                     | 0.0%                            |
| 10   | W, W  | 0                     | 0.0%                            |
| 11   | W, AN   | 0                     | 0.0%                            |
| 12   | D, D  | 0                     | 0.0%                            |
| 13   | W, W  | -1                    | 0.0%                            |
| 14   | D, D  | 0                     | 0.0%                            |
| 15   | C, C  | 0                     | 0.0%                            |
| 16   | D, C  | 0                     | 0.0%                            |
| 17   | C, C  | 0                     | 0.0%                            |
| 18   | C, C  | 0                     | 0.0%                            |
| 19   | C, C  | 0                     | 0.0%                            |
| 20   | AN, W   | 0                     | 0.0%                            |
| 21   | C, C  | 0                     | 0.0%                            |
| 22   | W, W  | 0                     | 0.0%                            |
| 23   | W, W  | 0                     | 0.0%                            |
| 24   | W, W  | 0                     | 0.0%                            |
| 25   | W, W  | -1                    | 0.0%                            |
| 26   | W, AN   | 0                     | 0.0%                            |
| 27   | AN, AN  | 0                     | 0.0%                            |
| 28   | D, D  | 0                     | 0.0%                            |
| 29   | D, D  | 0                     | 0.0%                            |
| 30   | AN, BN  | 0                     | 0.0%                            |
| 31   | BN, D   | 0                     | 0.0%                            |
| 32   | AN, W   | 0                     | 0.0%                            |
| 33   | W, W  | -1                    | 0.0%                            |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v1 minus NAA (AF) | Alt2v1 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 34             | D, C  | 0                     | 0.0%                            |
| 35             | C, C  | 0                     | 0.0%                            |
| 36             | D, BN   | 0                     | 0.0%                            |
| 37             | BN, AN  | 0                     | 0.0%                            |
| 38             | W, W  | 0                     | 0.0%                            |
| 39             | BN, D   | 0                     | 0.0%                            |
| 40             | D, C  | 0                     | 0.0%                            |
| 41             | C, C  | 0                     | 0.0%                            |
| 42             | C, C  | 0                     | 0.0%                            |
| <b>Average</b> |   | <b>0</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>0</b>              | <b>0.0%</b>                     |
| <b>Minimum</b> |   | <b>-1</b>             | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

### I-1.2.5 Changes in Groundwater-Surface Water Interaction Flow, Alternative 2 without TUCP Delta VA Compared to No Action Alternative

Table I.1-253 through Table I.1-273 provide the annual simulated groundwater-surface water interaction flow through the model simulation period for each of the 21 model subregions for Alternative 2 without TUCP Delta VA compared to the No Action Alternative.

Table I.1-253. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 1 (SR1) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 720                   | 0.2%                            |
| 2    | W, W  | -274                  | -0.1%                           |
| 3    | C, C  | -750                  | -0.3%                           |
| 4    | C, C  | 15,353                | 5.9%                            |
| 5    | AN, W   | 7,482                 | 3.3%                            |
| 6    | BN, AN  | 3,125                 | 1.2%                            |
| 7    | AN, W   | 653                   | 0.3%                            |
| 8    | D, D  | 738                   | 0.3%                            |
| 9    | W, W  | 815                   | 0.3%                            |
| 10   | W, W  | -1,110                | -0.4%                           |
| 11   | W, AN   | -1,799                | -0.5%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 12             | D, D  | 1,201                 | 0.4%                            |
| 13             | W, W  | 584                   | 0.2%                            |
| 14             | D, D  | 834                   | 0.3%                            |
| 15             | C, C  | -620                  | -0.2%                           |
| 16             | D, C  | 3,105                 | 1.3%                            |
| 17             | C, C  | 898                   | 0.4%                            |
| 18             | C, C  | 10,480                | 5.2%                            |
| 19             | C, C  | 18,406                | 9.6%                            |
| 20             | AN, W   | 3,016                 | 1.5%                            |
| 21             | C, C  | 785                   | 0.3%                            |
| 22             | W, W  | 1,387                 | 0.6%                            |
| 23             | W, W  | -152                  | -0.1%                           |
| 24             | W, W  | 2,468                 | 0.9%                            |
| 25             | W, W  | 241                   | 0.1%                            |
| 26             | W, AN   | -1,513                | -0.5%                           |
| 27             | AN, AN  | 1,247                 | 0.4%                            |
| 28             | D, D  | 2,147                 | 0.7%                            |
| 29             | D, D  | 448                   | 0.2%                            |
| 30             | AN, BN  | -787                  | -0.3%                           |
| 31             | BN, D   | -500                  | -0.2%                           |
| 32             | AN, W   | 1,312                 | 0.5%                            |
| 33             | W, W  | 958                   | 0.3%                            |
| 34             | D, C  | -2,559                | -0.8%                           |
| 35             | C, C  | 732                   | 0.3%                            |
| 36             | D, BN   | 1,233                 | 0.5%                            |
| 37             | BN, AN  | 1,199                 | 0.5%                            |
| 38             | W, W  | 1,159                 | 0.5%                            |
| 39             | BN, D   | 136                   | 0.1%                            |
| 40             | D, C  | 1,718                 | 0.6%                            |
| 41             | C, C  | 12,469                | 5.2%                            |
| 42             | C, C  | 4,768                 | 2.2%                            |
| <b>Average</b> |   | <b>2,185</b>          | <b>1.0%</b>                     |
| <b>Maximum</b> |   | <b>18,406</b>         | <b>9.6%</b>                     |
| <b>Minimum</b> |   | <b>-2,559</b>         | <b>-0.8%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-254. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 2 (SR2) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 1,883                 | 2.0%                            |
| 2    | W, W  | 73                    | 0.2%                            |
| 3    | C, C  | -23                   | -0.2%                           |
| 4    | C, C  | 7,454                 | 60.9%                           |
| 5    | AN, W   | -1,998                | -0.5%                           |
| 6    | BN, AN  | 6,375                 | 4.7%                            |
| 7    | AN, W   | 2,809                 | 1.6%                            |
| 8    | D, D  | 2,928                 | 2.4%                            |
| 9    | W, W  | 3,519                 | 2.5%                            |
| 10   | W, W  | -311                  | -2.0%                           |
| 11   | W, AN   | -2,659                | -8.6%                           |
| 12   | D, D  | 2,846                 | 9.4%                            |
| 13   | W, W  | 3,613                 | 5.5%                            |
| 14   | D, D  | 3,049                 | 4.5%                            |
| 15   | C, C  | 3,302                 | 2.4%                            |
| 16   | D, C  | 8,799                 | 4.4%                            |
| 17   | C, C  | 2,156                 | 1.9%                            |
| 18   | C, C  | -1,456                | -0.9%                           |
| 19   | C, C  | 11,971                | 4.7%                            |
| 20   | AN, W   | 2,145                 | 0.6%                            |
| 21   | C, C  | 2,007                 | 2.3%                            |
| 22   | W, W  | 8,240                 | 3.0%                            |
| 23   | W, W  | 3,356                 | 2.2%                            |
| 24   | W, W  | 5,659                 | 7.1%                            |
| 25   | W, W  | 965                   | 1.2%                            |
| 26   | W, AN   | -2,852                | -88.8%                          |
| 27   | AN, AN  | 2,654                 | 5.6%                            |
| 28   | D, D  | 4,334                 | 12.7%                           |
| 29   | D, D  | 2,498                 | 2.2%                            |
| 30   | AN, BN  | -508                  | -0.3%                           |
| 31   | BN, D   | -589                  | -0.8%                           |
| 32   | AN, W   | 2,199                 | 2.9%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 1,495                 | 4.0%                            |
| 34             | D, C  | -3,913                | -17.0%                          |
| 35             | C, C  | 2,187                 | 2.5%                            |
| 36             | D, BN   | 5,612                 | 4.4%                            |
| 37             | BN, AN  | 4,424                 | 2.3%                            |
| 38             | W, W  | 5,034                 | 3.1%                            |
| 39             | BN, D   | 761                   | 1.2%                            |
| 40             | D, C  | 2,869                 | 2.2%                            |
| 41             | C, C  | 705                   | 0.6%                            |
| 42             | C, C  | 6,589                 | 3.0%                            |
| <b>Average</b> |   | <b>2,624</b>          | <b>1.2%</b>                     |
| <b>Maximum</b> |   | <b>11,971</b>         | <b>60.9%</b>                    |
| <b>Minimum</b> |   | <b>-3,913</b>         | <b>-88.8%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-255. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 3 (SR3) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -161                  | -0.2%                           |
| 2    | W, W  | -105                  | -0.1%                           |
| 3    | C, C  | 503                   | 0.6%                            |
| 4    | C, C  | 12,725                | 19.4%                           |
| 5    | AN, W   | 13,054                | 26.7%                           |
| 6    | BN, AN  | 4,774                 | 6.8%                            |
| 7    | AN, W   | 2,978                 | 4.1%                            |
| 8    | D, D  | 2,087                 | 2.7%                            |
| 9    | W, W  | 1,934                 | 2.2%                            |
| 10   | W, W  | 1,469                 | 1.4%                            |
| 11   | W, AN   | 1,113                 | 1.0%                            |
| 12   | D, D  | 1,203                 | 1.3%                            |
| 13   | W, W  | 1,842                 | 2.1%                            |
| 14   | D, D  | 1,928                 | 2.3%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 3,404                 | 4.3%                            |
| 16             | D, C  | 3,783                 | 5.4%                            |
| 17             | C, C  | 1,611                 | 2.4%                            |
| 18             | C, C  | 11,852                | 23.8%                           |
| 19             | C, C  | 14,164                | 35.7%                           |
| 20             | AN, W   | 3,707                 | 8.3%                            |
| 21             | C, C  | 3,527                 | 5.3%                            |
| 22             | W, W  | 5,625                 | 9.7%                            |
| 23             | W, W  | 3,980                 | 5.2%                            |
| 24             | W, W  | 3,226                 | 3.7%                            |
| 25             | W, W  | 2,586                 | 2.9%                            |
| 26             | W, AN   | 2,214                 | 2.1%                            |
| 27             | AN, AN  | 2,163                 | 2.4%                            |
| 28             | D, D  | 1,980                 | 2.2%                            |
| 29             | D, D  | 1,696                 | 2.0%                            |
| 30             | AN, BN  | 935                   | 1.1%                            |
| 31             | BN, D   | 655                   | 0.7%                            |
| 32             | AN, W   | 290                   | 0.3%                            |
| 33             | W, W  | 234                   | 0.2%                            |
| 34             | D, C  | 12                    | 0.0%                            |
| 35             | C, C  | 953                   | 1.1%                            |
| 36             | D, BN   | 2,526                 | 3.3%                            |
| 37             | BN, AN  | 1,823                 | 2.5%                            |
| 38             | W, W  | 1,515                 | 1.7%                            |
| 39             | BN, D   | 1,171                 | 1.3%                            |
| 40             | D, C  | 1,259                 | 1.5%                            |
| 41             | C, C  | 16,324                | 23.2%                           |
| 42             | C, C  | 14,719                | 30.4%                           |
| <b>Average</b> |   | <b>3,649</b>          | <b>6.0%</b>                     |
| <b>Maximum</b> |   | <b>16,324</b>         | <b>35.7%</b>                    |
| <b>Minimum</b> |   | <b>-161</b>           | <b>-0.2%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-256. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 4 (SR4) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -1,798                | -0.4%                           |
| 2    | W, W  | -5,045                | -1.2%                           |
| 3    | C, C  | -6,713                | -1.9%                           |
| 4    | C, C  | 48,438                | 16.7%                           |
| 5    | AN, W   | 21,888                | 7.1%                            |
| 6    | BN, AN  | 13,241                | 3.4%                            |
| 7    | AN, W   | 1,201                 | 0.3%                            |
| 8    | D, D  | 237                   | 0.1%                            |
| 9    | W, W  | 3,654                 | 0.8%                            |
| 10   | W, W  | -744                  | -0.2%                           |
| 11   | W, AN   | -9,076                | -2.0%                           |
| 12   | D, D  | 948                   | 0.2%                            |
| 13   | W, W  | 225                   | 0.1%                            |
| 14   | D, D  | 31                    | 0.0%                            |
| 15   | C, C  | -6,122                | -1.6%                           |
| 16   | D, C  | 5,509                 | 1.7%                            |
| 17   | C, C  | -872                  | -0.2%                           |
| 18   | C, C  | 30,263                | 9.5%                            |
| 19   | C, C  | 57,558                | 20.0%                           |
| 20   | AN, W   | 4,745                 | 1.3%                            |
| 21   | C, C  | 3,189                 | 0.9%                            |
| 22   | W, W  | 5,887                 | 1.5%                            |
| 23   | W, W  | -660                  | -0.2%                           |
| 24   | W, W  | 6,336                 | 1.6%                            |
| 25   | W, W  | -484                  | -0.1%                           |
| 26   | W, AN   | -8,744                | -2.0%                           |
| 27   | AN, AN  | 3,964                 | 1.0%                            |
| 28   | D, D  | 5,109                 | 1.3%                            |
| 29   | D, D  | -1,314                | -0.3%                           |
| 30   | AN, BN  | -5,461                | -1.4%                           |
| 31   | BN, D   | -6,692                | -1.7%                           |
| 32   | AN, W   | 909                   | 0.2%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -2,017                | -0.5%                           |
| 34             | D, C  | -12,969               | -3.5%                           |
| 35             | C, C  | -2,732                | -0.7%                           |
| 36             | D, BN   | 275                   | 0.1%                            |
| 37             | BN, AN  | -590                  | -0.2%                           |
| 38             | W, W  | 643                   | 0.2%                            |
| 39             | BN, D   | -5,418                | -1.5%                           |
| 40             | D, C  | 372                   | 0.1%                            |
| 41             | C, C  | 36,562                | 10.7%                           |
| 42             | C, C  | 40,510                | 13.4%                           |
| <b>Average</b> |   | <b>5,101</b>          | <b>1.7%</b>                     |
| <b>Maximum</b> |   | <b>57,558</b>         | <b>20.0%</b>                    |
| <b>Minimum</b> |   | <b>-12,969</b>        | <b>-3.5%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-257. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 5 (SR5) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -1,744                | -0.4%                           |
| 2    | W, W  | -3,098                | -0.8%                           |
| 3    | C, C  | 4,411                 | 1.1%                            |
| 4    | C, C  | 43                    | 0.0%                            |
| 5    | AN, W   | 16,673                | 10.4%                           |
| 6    | BN, AN  | -5,121                | -1.6%                           |
| 7    | AN, W   | 6,787                 | 1.8%                            |
| 8    | D, D  | -1,264                | -0.4%                           |
| 9    | W, W  | 1,755                 | 0.4%                            |
| 10   | W, W  | 2,103                 | 0.4%                            |
| 11   | W, AN   | -2,954                | -0.6%                           |
| 12   | D, D  | 5,535                 | 1.3%                            |
| 13   | W, W  | -2,686                | -0.6%                           |
| 14   | D, D  | 120                   | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 585                   | 0.2%                            |
| 16             | D, C  | 2,693                 | 1.0%                            |
| 17             | C, C  | -14,880               | -4.5%                           |
| 18             | C, C  | 9,604                 | 3.9%                            |
| 19             | C, C  | 7,927                 | 3.5%                            |
| 20             | AN, W   | 18,610                | 7.0%                            |
| 21             | C, C  | 4,910                 | 1.4%                            |
| 22             | W, W  | 7,816                 | 2.3%                            |
| 23             | W, W  | 3,572                 | 0.9%                            |
| 24             | W, W  | 81                    | 0.0%                            |
| 25             | W, W  | 200                   | 0.0%                            |
| 26             | W, AN   | 180                   | 0.0%                            |
| 27             | AN, AN  | -888                  | -0.2%                           |
| 28             | D, D  | -1,467                | -0.3%                           |
| 29             | D, D  | 10,172                | 2.7%                            |
| 30             | AN, BN  | -10,231               | -3.0%                           |
| 31             | BN, D   | -1,227                | -0.3%                           |
| 32             | AN, W   | -3,343                | -0.8%                           |
| 33             | W, W  | 260                   | 0.1%                            |
| 34             | D, C  | 12,069                | 2.8%                            |
| 35             | C, C  | -6,112                | -1.6%                           |
| 36             | D, BN   | 5,346                 | 1.7%                            |
| 37             | BN, AN  | -1,585                | -0.5%                           |
| 38             | W, W  | -4,214                | -1.0%                           |
| 39             | BN, D   | -2,255                | -0.6%                           |
| 40             | D, C  | 12,426                | 3.3%                            |
| 41             | C, C  | -5,545                | -2.0%                           |
| 42             | C, C  | 6,153                 | 2.9%                            |
| <b>Average</b> |   | <b>1,700</b>          | <b>0.7%</b>                     |
| <b>Maximum</b> |   | <b>18,610</b>         | <b>10.4%</b>                    |
| <b>Minimum</b> |   | <b>-14,880</b>        | <b>-4.5%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-258. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 6 (SR6) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -1,889                | -3.4%                           |
| 2    | W, W  | -1,316                | -1.8%                           |
| 3    | C, C  | -590                  | -0.5%                           |
| 4    | C, C  | -3,806                | -2.7%                           |
| 5    | AN, W   | -4,734                | -2.0%                           |
| 6    | BN, AN  | -1,287                | -0.8%                           |
| 7    | AN, W   | -160                  | -0.1%                           |
| 8    | D, D  | -2,615                | -1.8%                           |
| 9    | W, W  | 24                    | 0.0%                            |
| 10   | W, W  | -1,262                | -5.9%                           |
| 11   | W, AN   | -3,193                | -11.2%                          |
| 12   | D, D  | 514                   | 0.7%                            |
| 13   | W, W  | -562                  | -1.2%                           |
| 14   | D, D  | -1,433                | -1.4%                           |
| 15   | C, C  | -3,365                | -2.6%                           |
| 16   | D, C  | 1,625                 | 1.1%                            |
| 17   | C, C  | -2,886                | -2.3%                           |
| 18   | C, C  | -7,359                | -4.2%                           |
| 19   | C, C  | -2,837                | -1.4%                           |
| 20   | AN, W   | -5,053                | -2.0%                           |
| 21   | C, C  | -2,122                | -1.3%                           |
| 22   | W, W  | -3,010                | -1.5%                           |
| 23   | W, W  | -2,296                | -1.7%                           |
| 24   | W, W  | -1,275                | -1.2%                           |
| 25   | W, W  | -1,832                | -3.2%                           |
| 26   | W, AN   | -3,334                | -5.8%                           |
| 27   | AN, AN  | -2,145                | -2.6%                           |
| 28   | D, D  | -1,367                | -1.5%                           |
| 29   | D, D  | -748                  | -0.7%                           |
| 30   | AN, BN  | -4,305                | -4.2%                           |
| 31   | BN, D   | -2,501                | -2.6%                           |
| 32   | AN, W   | -1,503                | -2.2%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -1,384                | -3.3%                           |
| 34             | D, C  | -1,720                | -1.8%                           |
| 35             | C, C  | -2,443                | -2.5%                           |
| 36             | D, BN   | 6,321                 | 5.2%                            |
| 37             | BN, AN  | -11,846               | -8.5%                           |
| 38             | W, W  | -5,711                | -7.1%                           |
| 39             | BN, D   | -4,503                | -3.9%                           |
| 40             | D, C  | -3,443                | -2.2%                           |
| 41             | C, C  | -6,941                | -5.0%                           |
| 42             | C, C  | -3,158                | -1.5%                           |
| <b>Average</b> |   | <b>-2,463</b>         | <b>-2.4%</b>                    |
| <b>Maximum</b> |   | <b>6,321</b>          | <b>5.2%</b>                     |
| <b>Minimum</b> |   | <b>-11,846</b>        | <b>-11.2%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-259. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 7 (SR7) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -374                  | -2.6%                           |
| 2    | W, W  | -306                  | -1.3%                           |
| 3    | C, C  | 1,269                 | 7.2%                            |
| 4    | C, C  | -5,792                | -18.7%                          |
| 5    | AN, W   | 14                    | 0.0%                            |
| 6    | BN, AN  | -2,839                | -115.3%                         |
| 7    | AN, W   | 869                   | 11.0%                           |
| 8    | D, D  | 831                   | 11.6%                           |
| 9    | W, W  | -821                  | -19.3%                          |
| 10   | W, W  | -269                  | -0.7%                           |
| 11   | W, AN   | -1,026                | -3.1%                           |
| 12   | D, D  | 1,122                 | 3.5%                            |
| 13   | W, W  | -1,019                | -2.9%                           |
| 14   | D, D  | 414                   | 3.4%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | -2,363                | -224.9%                         |
| 16             | D, C  | 3,771                 | 20.8%                           |
| 17             | C, C  | -3,772                | -184.4%                         |
| 18             | C, C  | -5,810                | -25.7%                          |
| 19             | C, C  | 4,975                 | 18.8%                           |
| 20             | AN, W   | -3,861                | -14.1%                          |
| 21             | C, C  | -2,222                | -30.6%                          |
| 22             | W, W  | -1,600                | -6.6%                           |
| 23             | W, W  | -1,654                | -9.5%                           |
| 24             | W, W  | -327                  | -4.0%                           |
| 25             | W, W  | -163                  | -1.9%                           |
| 26             | W, AN   | -325                  | -2.2%                           |
| 27             | AN, AN  | -67                   | -0.6%                           |
| 28             | D, D  | -318                  | -1.9%                           |
| 29             | D, D  | 1,583                 | 2719.2%                         |
| 30             | AN, BN  | -2,850                | -19.5%                          |
| 31             | BN, D   | 144                   | 3.1%                            |
| 32             | AN, W   | -1,085                | -53.8%                          |
| 33             | W, W  | -894                  | -19.2%                          |
| 34             | D, C  | 2,607                 | 98.7%                           |
| 35             | C, C  | -3,689                | -139.5%                         |
| 36             | D, BN   | 1,309                 | 5.3%                            |
| 37             | BN, AN  | -1,068                | -5.8%                           |
| 38             | W, W  | -891                  | -10.1%                          |
| 39             | BN, D   | -222                  | -2.3%                           |
| 40             | D, C  | 2,646                 | 60.1%                           |
| 41             | C, C  | -6,955                | -23.6%                          |
| 42             | C, C  | 3,372                 | 8.0%                            |
| <b>Average</b> |   | <b>-658</b>           | <b>48.3%</b>                    |
| <b>Maximum</b> |   | <b>4,975</b>          | <b>2719.2%</b>                  |
| <b>Minimum</b> |   | <b>-6,955</b>         | <b>-224.9%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-260. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 8 (SR8) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 61                    | 0.0%                            |
| 2    | W, W  | 88                    | 0.0%                            |
| 3    | C, C  | 522                   | 0.2%                            |
| 4    | C, C  | -2,198                | -1.1%                           |
| 5    | AN, W   | 1,417                 | 0.4%                            |
| 6    | BN, AN  | -798                  | -0.2%                           |
| 7    | AN, W   | -795                  | -0.3%                           |
| 8    | D, D  | 1,185                 | 0.5%                            |
| 9    | W, W  | -426                  | -0.1%                           |
| 10   | W, W  | 63                    | 0.0%                            |
| 11   | W, AN   | 246                   | 0.1%                            |
| 12   | D, D  | 62                    | 0.0%                            |
| 13   | W, W  | -622                  | -0.3%                           |
| 14   | D, D  | 523                   | 0.3%                            |
| 15   | C, C  | -1,164                | -0.6%                           |
| 16   | D, C  | 1,170                 | 0.5%                            |
| 17   | C, C  | -278                  | -0.1%                           |
| 18   | C, C  | -1,955                | -0.8%                           |
| 19   | C, C  | 4,292                 | 1.6%                            |
| 20   | AN, W   | -1,705                | -0.5%                           |
| 21   | C, C  | -940                  | -0.4%                           |
| 22   | W, W  | -157                  | 0.0%                            |
| 23   | W, W  | -800                  | -0.2%                           |
| 24   | W, W  | 101                   | 0.0%                            |
| 25   | W, W  | 13                    | 0.0%                            |
| 26   | W, AN   | -225                  | -0.1%                           |
| 27   | AN, AN  | 528                   | 0.2%                            |
| 28   | D, D  | -174                  | -0.1%                           |
| 29   | D, D  | 500                   | 0.2%                            |
| 30   | AN, BN  | -502                  | -0.2%                           |
| 31   | BN, D   | 305                   | 0.1%                            |
| 32   | AN, W   | -576                  | -0.2%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 45                    | 0.0%                            |
| 34             | D, C  | 950                   | 0.4%                            |
| 35             | C, C  | -1,265                | -0.6%                           |
| 36             | D, BN   | 855                   | 0.4%                            |
| 37             | BN, AN  | -437                  | -0.2%                           |
| 38             | W, W  | 31                    | 0.0%                            |
| 39             | BN, D   | 307                   | 0.1%                            |
| 40             | D, C  | 557                   | 0.2%                            |
| 41             | C, C  | -1,430                | -0.6%                           |
| 42             | C, C  | 3,199                 | 1.2%                            |
| <b>Average</b> |   | <b>14</b>             | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>4,292</b>          | <b>1.6%</b>                     |
| <b>Minimum</b> |   | <b>-2,198</b>         | <b>-1.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-261. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 9 (SR9) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 2,684                 | 0.8%                            |
| 2    | W, W  | 68                    | 0.0%                            |
| 3    | C, C  | 4,886                 | 1.0%                            |
| 4    | C, C  | -7,202                | -2.0%                           |
| 5    | AN, W   | 122                   | 0.1%                            |
| 6    | BN, AN  | -3,791                | -1.1%                           |
| 7    | AN, W   | 6,396                 | 2.3%                            |
| 8    | D, D  | 3,895                 | 1.1%                            |
| 9    | W, W  | 1,298                 | 0.5%                            |
| 10   | W, W  | 1,099                 | 0.3%                            |
| 11   | W, AN   | -2,498                | -0.6%                           |
| 12   | D, D  | 8,568                 | 1.8%                            |
| 13   | W, W  | -1,781                | -0.5%                           |
| 14   | D, D  | 4,097                 | 0.9%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | -12,857               | -3.3%                           |
| 16             | D, C  | 19,757                | 6.2%                            |
| 17             | C, C  | 556                   | 0.1%                            |
| 18             | C, C  | -3,940                | -1.2%                           |
| 19             | C, C  | 22,770                | 7.6%                            |
| 20             | AN, W   | -19,251               | -9.3%                           |
| 21             | C, C  | 1,536                 | 0.4%                            |
| 22             | W, W  | -5,299                | -2.7%                           |
| 23             | W, W  | -3,494                | -1.2%                           |
| 24             | W, W  | 1,537                 | 0.4%                            |
| 25             | W, W  | -13                   | 0.0%                            |
| 26             | W, AN   | -3,559                | -0.8%                           |
| 27             | AN, AN  | 2,685                 | 0.6%                            |
| 28             | D, D  | 3,175                 | 0.7%                            |
| 29             | D, D  | 5,469                 | 1.4%                            |
| 30             | AN, BN  | -6,444                | -1.9%                           |
| 31             | BN, D   | 571                   | 0.2%                            |
| 32             | AN, W   | 1,466                 | 0.4%                            |
| 33             | W, W  | 45                    | 0.0%                            |
| 34             | D, C  | 5,494                 | 1.2%                            |
| 35             | C, C  | -6,803                | -1.6%                           |
| 36             | D, BN   | 7,459                 | 1.9%                            |
| 37             | BN, AN  | 2,231                 | 0.7%                            |
| 38             | W, W  | -1,242                | -0.4%                           |
| 39             | BN, D   | -70                   | 0.0%                            |
| 40             | D, C  | 11,382                | 3.0%                            |
| 41             | C, C  | -8,953                | -2.1%                           |
| 42             | C, C  | 17,734                | 5.2%                            |
| <b>Average</b> |   | <b>1,185</b>          | <b>0.2%</b>                     |
| <b>Maximum</b> |   | <b>22,770</b>         | <b>7.6%</b>                     |
| <b>Minimum</b> |   | <b>-19,251</b>        | <b>-9.3%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-262. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 10 (SR10) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 3,983                 | 4.6%                            |
| 2    | W, W  | 5,517                 | 6.1%                            |
| 3    | C, C  | 5,321                 | 5.9%                            |
| 4    | C, C  | -17,604               | -78.5%                          |
| 5    | AN, W   | -8,138                | -48.3%                          |
| 6    | BN, AN  | 624                   | 0.9%                            |
| 7    | AN, W   | 3,297                 | 7.6%                            |
| 8    | D, D  | 4,390                 | 5.3%                            |
| 9    | W, W  | 6,136                 | 8.7%                            |
| 10   | W, W  | 4,257                 | 5.1%                            |
| 11   | W, AN   | 3,400                 | 2.9%                            |
| 12   | D, D  | 2,464                 | 2.0%                            |
| 13   | W, W  | 4,731                 | 5.8%                            |
| 14   | D, D  | 3,110                 | 2.7%                            |
| 15   | C, C  | 3,697                 | 3.6%                            |
| 16   | D, C  | 4,010                 | 5.2%                            |
| 17   | C, C  | 5,001                 | 8.4%                            |
| 18   | C, C  | 2,229                 | 40.5%                           |
| 19   | C, C  | 1,729                 | 14.5%                           |
| 20   | AN, W   | 2,354                 | 12.1%                           |
| 21   | C, C  | 1,175                 | 3.6%                            |
| 22   | W, W  | 3,255                 | 54.4%                           |
| 23   | W, W  | 3,656                 | 6.6%                            |
| 24   | W, W  | 2,676                 | 3.7%                            |
| 25   | W, W  | 622                   | 0.8%                            |
| 26   | W, AN   | 840                   | 0.7%                            |
| 27   | AN, AN  | 1,847                 | 1.8%                            |
| 28   | D, D  | 2,778                 | 2.5%                            |
| 29   | D, D  | 3,478                 | 3.5%                            |
| 30   | AN, BN  | 5,033                 | 5.4%                            |
| 31   | BN, D   | 6,351                 | 6.4%                            |
| 32   | AN, W   | 9,184                 | 8.9%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 5,390                 | 4.6%                            |
| 34             | D, C  | 4,618                 | 3.9%                            |
| 35             | C, C  | 4,776                 | 5.5%                            |
| 36             | D, BN   | 5,373                 | 6.4%                            |
| 37             | BN, AN  | 6,487                 | 9.0%                            |
| 38             | W, W  | 9,712                 | 8.6%                            |
| 39             | BN, D   | 6,574                 | 4.7%                            |
| 40             | D, C  | 4,395                 | 3.8%                            |
| 41             | C, C  | -10,274               | -21.6%                          |
| 42             | C, C  | -6,590                | -78.5%                          |
| <b>Average</b> |   | <b>2,663</b>          | <b>1.4%</b>                     |
| <b>Maximum</b> |   | <b>9,712</b>          | <b>54.4%</b>                    |
| <b>Minimum</b> |   | <b>-17,604</b>        | <b>-78.5%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-263. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 11 (SR11) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 994                   | 2.4%                            |
| 2    | W, W  | 1,200                 | 2.6%                            |
| 3    | C, C  | 1,314                 | 6.6%                            |
| 4    | C, C  | 19,817                | 20.8%                           |
| 5    | AN, W   | -10,730               | -14.9%                          |
| 6    | BN, AN  | 1,311                 | 4.2%                            |
| 7    | AN, W   | 774                   | 10.3%                           |
| 8    | D, D  | 1,934                 | 9.8%                            |
| 9    | W, W  | 867                   | 4.4%                            |
| 10   | W, W  | 757                   | 2.4%                            |
| 11   | W, AN   | 1,192                 | 1.2%                            |
| 12   | D, D  | 671                   | 0.9%                            |
| 13   | W, W  | -1,007                | -1.9%                           |
| 14   | D, D  | 2,867                 | 7.3%                            |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 1,613                 | 7.5%                            |
| 16             | D, C  | 782                   | 1.4%                            |
| 17             | C, C  | 1,022                 | 1.6%                            |
| 18             | C, C  | 2,777                 | 3.4%                            |
| 19             | C, C  | 226                   | 0.3%                            |
| 20             | AN, W   | -1,621                | -3.7%                           |
| 21             | C, C  | -2,650                | -5.7%                           |
| 22             | W, W  | -771                  | -2.0%                           |
| 23             | W, W  | 125                   | 1.2%                            |
| 24             | W, W  | -3,489                | -16.6%                          |
| 25             | W, W  | 6,694                 | 15.0%                           |
| 26             | W, AN   | 2,121                 | 2.0%                            |
| 27             | AN, AN  | -323                  | -0.6%                           |
| 28             | D, D  | 1,909                 | 4.0%                            |
| 29             | D, D  | 1,439                 | 4.1%                            |
| 30             | AN, BN  | 1,778                 | 5.2%                            |
| 31             | BN, D   | 2,091                 | 5.7%                            |
| 32             | AN, W   | 6,762                 | 13.4%                           |
| 33             | W, W  | -1,445                | -2.2%                           |
| 34             | D, C  | 2,680                 | 3.8%                            |
| 35             | C, C  | 1,936                 | 41.4%                           |
| 36             | D, BN   | 2,363                 | 13.0%                           |
| 37             | BN, AN  | 2,524                 | 34.3%                           |
| 38             | W, W  | 2,588                 | 568.1%                          |
| 39             | BN, D   | 2,277                 | 2.7%                            |
| 40             | D, C  | 2,311                 | 17.2%                           |
| 41             | C, C  | 19,030                | 30.8%                           |
| 42             | C, C  | -11,792               | -13.0%                          |
| <b>Average</b> |   | <b>1,546</b>          | <b>18.8%</b>                    |
| <b>Maximum</b> |   | <b>19,817</b>         | <b>568.1%</b>                   |
| <b>Minimum</b> |   | <b>-11,792</b>        | <b>-16.6%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-264. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 12 (SR12) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 1,787                 | 2.1%                            |
| 2    | W, W  | 1,880                 | 2.4%                            |
| 3    | C, C  | 2,146                 | 2.1%                            |
| 4    | C, C  | 1,518                 | 0.9%                            |
| 5    | AN, W   | 1,413                 | 0.8%                            |
| 6    | BN, AN  | 2,040                 | 1.2%                            |
| 7    | AN, W   | 2,160                 | 1.6%                            |
| 8    | D, D  | 2,482                 | 2.1%                            |
| 9    | W, W  | 2,621                 | 2.7%                            |
| 10   | W, W  | 2,195                 | 2.8%                            |
| 11   | W, AN   | 1,889                 | 3.1%                            |
| 12   | D, D  | 1,674                 | 2.3%                            |
| 13   | W, W  | 1,726                 | 2.2%                            |
| 14   | D, D  | 1,828                 | 1.9%                            |
| 15   | C, C  | 1,853                 | 1.3%                            |
| 16   | D, C  | 1,074                 | 0.5%                            |
| 17   | C, C  | 1,495                 | 0.7%                            |
| 18   | C, C  | 3,295                 | 1.4%                            |
| 19   | C, C  | 834                   | 0.4%                            |
| 20   | AN, W   | 82                    | 0.0%                            |
| 21   | C, C  | 531                   | 0.3%                            |
| 22   | W, W  | 2,244                 | 1.3%                            |
| 23   | W, W  | 1,611                 | 1.3%                            |
| 24   | W, W  | 1,406                 | 1.2%                            |
| 25   | W, W  | 1,133                 | 1.4%                            |
| 26   | W, AN   | 871                   | 1.7%                            |
| 27   | AN, AN  | 942                   | 1.1%                            |
| 28   | D, D  | 1,377                 | 1.6%                            |
| 29   | D, D  | 1,723                 | 1.7%                            |
| 30   | AN, BN  | 2,196                 | 2.3%                            |
| 31   | BN, D   | 2,661                 | 2.7%                            |
| 32   | AN, W   | 2,935                 | 4.2%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 2,620                 | 4.5%                            |
| 34             | D, C  | 2,304                 | 3.2%                            |
| 35             | C, C  | 2,013                 | 1.5%                            |
| 36             | D, BN   | 3,108                 | 2.1%                            |
| 37             | BN, AN  | 2,944                 | 2.7%                            |
| 38             | W, W  | 3,387                 | 3.4%                            |
| 39             | BN, D   | 2,776                 | 4.7%                            |
| 40             | D, C  | 2,696                 | 2.2%                            |
| 41             | C, C  | 2,006                 | 1.0%                            |
| 42             | C, C  | 1,438                 | 0.7%                            |
| <b>Average</b> |   | <b>1,927</b>          | <b>1.9%</b>                     |
| <b>Maximum</b> |   | <b>3,387</b>          | <b>4.7%</b>                     |
| <b>Minimum</b> |   | <b>82</b>             | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-265. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 13 (SR13) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 4,157                 | 0.7%                            |
| 2    | W, W  | 4,069                 | 0.7%                            |
| 3    | C, C  | 4,118                 | 0.7%                            |
| 4    | C, C  | -8,313                | -1.3%                           |
| 5    | AN, W   | -7,474                | -0.9%                           |
| 6    | BN, AN  | 144                   | 0.0%                            |
| 7    | AN, W   | 2,385                 | 0.3%                            |
| 8    | D, D  | 3,663                 | 0.6%                            |
| 9    | W, W  | 3,974                 | 0.6%                            |
| 10   | W, W  | 4,020                 | 0.5%                            |
| 11   | W, AN   | 4,437                 | 0.7%                            |
| 12   | D, D  | 4,286                 | 0.7%                            |
| 13   | W, W  | 3,578                 | 0.5%                            |
| 14   | D, D  | 4,134                 | 0.7%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 4,244                 | 0.7%                            |
| 16             | D, C  | 4,443                 | 0.7%                            |
| 17             | C, C  | 4,170                 | 0.7%                            |
| 18             | C, C  | 2,727                 | 0.4%                            |
| 19             | C, C  | 3,256                 | 0.4%                            |
| 20             | AN, W   | 3,755                 | 0.5%                            |
| 21             | C, C  | 3,659                 | 0.5%                            |
| 22             | W, W  | 4,464                 | 0.6%                            |
| 23             | W, W  | 4,623                 | 0.6%                            |
| 24             | W, W  | 4,418                 | 0.5%                            |
| 25             | W, W  | 4,397                 | 0.6%                            |
| 26             | W, AN   | 4,067                 | 0.7%                            |
| 27             | AN, AN  | 4,162                 | 0.6%                            |
| 28             | D, D  | 4,097                 | 0.7%                            |
| 29             | D, D  | 4,062                 | 0.7%                            |
| 30             | AN, BN  | 4,222                 | 0.7%                            |
| 31             | BN, D   | 4,494                 | 0.8%                            |
| 32             | AN, W   | 4,850                 | 0.8%                            |
| 33             | W, W  | 4,900                 | 0.8%                            |
| 34             | D, C  | 4,701                 | 0.8%                            |
| 35             | C, C  | 4,987                 | 0.8%                            |
| 36             | D, BN   | 4,801                 | 0.8%                            |
| 37             | BN, AN  | 5,153                 | 0.9%                            |
| 38             | W, W  | 5,557                 | 0.8%                            |
| 39             | BN, D   | 5,663                 | 0.9%                            |
| 40             | D, C  | 5,170                 | 0.8%                            |
| 41             | C, C  | -4,133                | -0.6%                           |
| 42             | C, C  | -3,078                | -0.4%                           |
| <b>Average</b> |   | <b>3,215</b>          | <b>0.5%</b>                     |
| <b>Maximum</b> |   | <b>5,663</b>          | <b>0.9%</b>                     |
| <b>Minimum</b> |   | <b>-8,313</b>         | <b>-1.3%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-266. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 14 (SR14) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 401                   | 0.7%                            |
| 2    | W, W  | -415                  | -0.8%                           |
| 3    | C, C  | 26                    | 0.1%                            |
| 4    | C, C  | -241                  | -0.5%                           |
| 5    | AN, W   | -50                   | 0.0%                            |
| 6    | BN, AN  | 135                   | 0.3%                            |
| 7    | AN, W   | -210                  | -0.3%                           |
| 8    | D, D  | 10                    | 0.0%                            |
| 9    | W, W  | 17                    | 0.0%                            |
| 10   | W, W  | -206                  | -0.1%                           |
| 11   | W, AN   | 228                   | 0.4%                            |
| 12   | D, D  | -99                   | -0.2%                           |
| 13   | W, W  | -246                  | -0.3%                           |
| 14   | D, D  | -446                  | -1.0%                           |
| 15   | C, C  | -57                   | -0.1%                           |
| 16   | D, C  | 107                   | 0.2%                            |
| 17   | C, C  | -134                  | -0.3%                           |
| 18   | C, C  | -185                  | -0.3%                           |
| 19   | C, C  | -38                   | -0.1%                           |
| 20   | AN, W   | -45                   | 0.0%                            |
| 21   | C, C  | -1                    | 0.0%                            |
| 22   | W, W  | -89                   | -0.1%                           |
| 23   | W, W  | 1                     | 0.0%                            |
| 24   | W, W  | 141                   | 0.2%                            |
| 25   | W, W  | 21                    | 0.0%                            |
| 26   | W, AN   | 22                    | 0.0%                            |
| 27   | AN, AN  | 24                    | 0.0%                            |
| 28   | D, D  | 16                    | 0.0%                            |
| 29   | D, D  | 6                     | 0.0%                            |
| 30   | AN, BN  | -69                   | -0.2%                           |
| 31   | BN, D   | -21                   | 0.0%                            |
| 32   | AN, W   | -30                   | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 172                   | 0.3%                            |
| 34             | D, C  | -12                   | 0.0%                            |
| 35             | C, C  | -201                  | -0.4%                           |
| 36             | D, BN   | -356                  | -0.8%                           |
| 37             | BN, AN  | -285                  | -0.5%                           |
| 38             | W, W  | -54                   | -0.1%                           |
| 39             | BN, D   | 30                    | 0.1%                            |
| 40             | D, C  | -96                   | -0.2%                           |
| 41             | C, C  | -135                  | -0.3%                           |
| 42             | C, C  | -14                   | 0.0%                            |
| <b>Average</b> |   | <b>-57</b>            | <b>-0.1%</b>                    |
| <b>Maximum</b> |   | <b>401</b>            | <b>0.7%</b>                     |
| <b>Minimum</b> |   | <b>-446</b>           | <b>-1.0%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-267. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 15 (SR15) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 7,607                 | 1.5%                            |
| 2    | W, W  | 8,998                 | 2.3%                            |
| 3    | C, C  | 2,244                 | 0.5%                            |
| 4    | C, C  | 2,916                 | 0.6%                            |
| 5    | AN, W   | 5,774                 | 0.6%                            |
| 6    | BN, AN  | 7,884                 | 1.7%                            |
| 7    | AN, W   | 16,247                | 2.0%                            |
| 8    | D, D  | 9,412                 | 2.4%                            |
| 9    | W, W  | 15,169                | 2.3%                            |
| 10   | W, W  | 17,041                | 3.1%                            |
| 11   | W, AN   | 11,155                | 2.9%                            |
| 12   | D, D  | 8,448                 | 2.1%                            |
| 13   | W, W  | 14,912                | 2.6%                            |
| 14   | D, D  | 10,833                | 2.7%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 9,240                 | 2.6%                            |
| 16             | D, C  | 11,249                | 2.8%                            |
| 17             | C, C  | 9,358                 | 2.2%                            |
| 18             | C, C  | 7,904                 | 1.7%                            |
| 19             | C, C  | 7,088                 | 1.5%                            |
| 20             | AN, W   | 6,868                 | 1.4%                            |
| 21             | C, C  | 7,285                 | 1.4%                            |
| 22             | W, W  | 15,365                | 1.6%                            |
| 23             | W, W  | 8,611                 | 1.3%                            |
| 24             | W, W  | 8,798                 | 1.4%                            |
| 25             | W, W  | 9,563                 | 1.8%                            |
| 26             | W, AN   | 6,129                 | 1.7%                            |
| 27             | AN, AN  | 6,705                 | 1.6%                            |
| 28             | D, D  | 8,468                 | 2.0%                            |
| 29             | D, D  | 8,889                 | 2.3%                            |
| 30             | AN, BN  | 8,927                 | 2.2%                            |
| 31             | BN, D   | 8,892                 | 2.2%                            |
| 32             | AN, W   | 9,396                 | 1.5%                            |
| 33             | W, W  | 18,775                | 2.8%                            |
| 34             | D, C  | 9,143                 | 2.2%                            |
| 35             | C, C  | 9,543                 | 2.4%                            |
| 36             | D, BN   | 11,811                | 2.7%                            |
| 37             | BN, AN  | 14,208                | 1.9%                            |
| 38             | W, W  | 21,358                | 2.7%                            |
| 39             | BN, D   | 11,666                | 2.3%                            |
| 40             | D, C  | 10,072                | 2.5%                            |
| 41             | C, C  | 7,594                 | 1.6%                            |
| 42             | C, C  | 5,002                 | 1.0%                            |
| <b>Average</b> |   | <b>9,918</b>          | <b>2.0%</b>                     |
| <b>Maximum</b> |   | <b>21,358</b>         | <b>3.1%</b>                     |
| <b>Minimum</b> |   | <b>2,244</b>          | <b>0.5%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-268. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 16 (SR16) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 608                   | 1.8%                            |
| 2    | W, W  | 580                   | 2.0%                            |
| 3    | C, C  | 586                   | 1.2%                            |
| 4    | C, C  | 1,019                 | 1.4%                            |
| 5    | AN, W   | 139                   | 0.2%                            |
| 6    | BN, AN  | 555                   | 1.3%                            |
| 7    | AN, W   | 612                   | 1.6%                            |
| 8    | D, D  | 649                   | 1.6%                            |
| 9    | W, W  | 713                   | 1.9%                            |
| 10   | W, W  | 743                   | 2.4%                            |
| 11   | W, AN   | 953                   | 5.7%                            |
| 12   | D, D  | 938                   | 3.5%                            |
| 13   | W, W  | 413                   | 1.5%                            |
| 14   | D, D  | 704                   | 2.6%                            |
| 15   | C, C  | 804                   | 1.9%                            |
| 16   | D, C  | 864                   | 1.6%                            |
| 17   | C, C  | 896                   | 1.4%                            |
| 18   | C, C  | 884                   | 1.2%                            |
| 19   | C, C  | 922                   | 1.3%                            |
| 20   | AN, W   | 821                   | 1.4%                            |
| 21   | C, C  | 938                   | 1.6%                            |
| 22   | W, W  | 980                   | 2.0%                            |
| 23   | W, W  | 1,017                 | 2.4%                            |
| 24   | W, W  | 982                   | 2.8%                            |
| 25   | W, W  | 978                   | 3.1%                            |
| 26   | W, AN   | 997                   | 4.0%                            |
| 27   | AN, AN  | 1,031                 | 3.7%                            |
| 28   | D, D  | 1,005                 | 2.4%                            |
| 29   | D, D  | 1,079                 | 2.1%                            |
| 30   | AN, BN  | 1,110                 | 1.9%                            |
| 31   | BN, D   | 1,136                 | 2.1%                            |
| 32   | AN, W   | 1,163                 | 2.8%                            |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 1,196                 | 4.2%                            |
| 34             | D, C  | 1,152                 | 2.4%                            |
| 35             | C, C  | 1,221                 | 2.0%                            |
| 36             | D, BN   | 1,223                 | 2.0%                            |
| 37             | BN, AN  | 1,210                 | 2.2%                            |
| 38             | W, W  | 1,318                 | 4.0%                            |
| 39             | BN, D   | 1,272                 | 2.7%                            |
| 40             | D, C  | 1,129                 | 1.5%                            |
| 41             | C, C  | 1,188                 | 1.3%                            |
| 42             | C, C  | 697                   | 0.8%                            |
| <b>Average</b> |   | <b>915</b>            | <b>2.2%</b>                     |
| <b>Maximum</b> |   | <b>1,318</b>          | <b>5.7%</b>                     |
| <b>Minimum</b> |   | <b>139</b>            | <b>0.2%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-269. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 17 (SR17) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 600                   | 3.0%                            |
| 2    | W, W  | 563                   | 1.2%                            |
| 3    | C, C  | 534                   | 0.5%                            |
| 4    | C, C  | 86                    | 0.1%                            |
| 5    | AN, W   | 775                   | 0.7%                            |
| 6    | BN, AN  | 727                   | 9.8%                            |
| 7    | AN, W   | 720                   | 2.1%                            |
| 8    | D, D  | 690                   | 5.9%                            |
| 9    | W, W  | 756                   | 2.9%                            |
| 10   | W, W  | 1,012                 | 2.1%                            |
| 11   | W, AN   | 882                   | 0.9%                            |
| 12   | D, D  | 936                   | 11.7%                           |
| 13   | W, W  | 999                   | 7.4%                            |
| 14   | D, D  | 1,040                 | 16.1%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 716                   | 1.3%                            |
| 16             | D, C  | 171                   | 0.3%                            |
| 17             | C, C  | 48                    | 0.1%                            |
| 18             | C, C  | 74                    | 0.1%                            |
| 19             | C, C  | 18                    | 0.0%                            |
| 20             | AN, W   | 826                   | 0.7%                            |
| 21             | C, C  | 864                   | 0.7%                            |
| 22             | W, W  | 1,052                 | 1.5%                            |
| 23             | W, W  | 1,210                 | 3.5%                            |
| 24             | W, W  | 1,194                 | 7.9%                            |
| 25             | W, W  | 1,152                 | 50.6%                           |
| 26             | W, AN   | 1,178                 | 6.2%                            |
| 27             | AN, AN  | 1,192                 | 6.9%                            |
| 28             | D, D  | 1,022                 | 1.8%                            |
| 29             | D, D  | 651                   | 0.9%                            |
| 30             | AN, BN  | 810                   | 1.0%                            |
| 31             | BN, D   | 673                   | 0.7%                            |
| 32             | AN, W   | 1,324                 | 1.8%                            |
| 33             | W, W  | 1,682                 | 5.7%                            |
| 34             | D, C  | 1,723                 | 2.7%                            |
| 35             | C, C  | 961                   | 1.1%                            |
| 36             | D, BN   | 830                   | 0.9%                            |
| 37             | BN, AN  | 1,588                 | 1.2%                            |
| 38             | W, W  | 2,250                 | 3.1%                            |
| 39             | BN, D   | 1,625                 | 3.2%                            |
| 40             | D, C  | 771                   | 0.7%                            |
| 41             | C, C  | 636                   | 0.5%                            |
| 42             | C, C  | 20                    | 0.0%                            |
| <b>Average</b> |   | <b>871</b>            | <b>4.0%</b>                     |
| <b>Maximum</b> |   | <b>2,250</b>          | <b>50.6%</b>                    |
| <b>Minimum</b> |   | <b>18</b>             | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-270. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 18 (SR18) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -329                  | -0.6%                           |
| 2    | W, W  | -506                  | -0.7%                           |
| 3    | C, C  | -940                  | -2.9%                           |
| 4    | C, C  | -652                  | -1.6%                           |
| 5    | AN, W   | -955                  | -0.7%                           |
| 6    | BN, AN  | -3,724                | -1.8%                           |
| 7    | AN, W   | -2,502                | -1.0%                           |
| 8    | D, D  | -2,038                | -0.7%                           |
| 9    | W, W  | -1,838                | -0.6%                           |
| 10   | W, W  | -686                  | -0.1%                           |
| 11   | W, AN   | 2,905                 | 0.2%                            |
| 12   | D, D  | 2,285                 | 0.3%                            |
| 13   | W, W  | -6,061                | -0.8%                           |
| 14   | D, D  | -3,961                | -0.6%                           |
| 15   | C, C  | -2,771                | -0.7%                           |
| 16   | D, C  | -2,136                | -1.3%                           |
| 17   | C, C  | -1,292                | -21.9%                          |
| 18   | C, C  | -878                  | -1.6%                           |
| 19   | C, C  | -430                  | -0.6%                           |
| 20   | AN, W   | -333                  | -0.3%                           |
| 21   | C, C  | -3                    | 0.0%                            |
| 22   | W, W  | -1,686                | -5.6%                           |
| 23   | W, W  | -2,985                | -1.0%                           |
| 24   | W, W  | -19,772               | -8.8%                           |
| 25   | W, W  | -9,781                | -1.9%                           |
| 26   | W, AN   | -7,057                | -0.9%                           |
| 27   | AN, AN  | -7,405                | -1.3%                           |
| 28   | D, D  | -6,458                | -1.5%                           |
| 29   | D, D  | -6,158                | -2.9%                           |
| 30   | AN, BN  | -5,711                | -7.7%                           |
| 31   | BN, D   | -3,985                | -11.2%                          |
| 32   | AN, W   | -4,617                | -6.7%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -3,138                | -1.7%                           |
| 34             | D, C  | -2,578                | -1.6%                           |
| 35             | C, C  | -986                  | -2.0%                           |
| 36             | D, BN   | 170                   | 0.2%                            |
| 37             | BN, AN  | -112                  | -0.1%                           |
| 38             | W, W  | -3,861                | -1.6%                           |
| 39             | BN, D   | -1,585                | -0.6%                           |
| 40             | D, C  | -1,541                | -4.4%                           |
| 41             | C, C  | -104                  | -0.2%                           |
| 42             | C, C  | 30                    | 0.0%                            |
| <b>Average</b> |   | <b>-2,766</b>         | <b>-2.4%</b>                    |
| <b>Maximum</b> |   | <b>2,905</b>          | <b>0.3%</b>                     |
| <b>Minimum</b> |   | <b>-19,772</b>        | <b>-21.9%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-271. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 19 (SR19) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 0                     | 0.0%                            |
| 2    | W, W  | 0                     | 0.0%                            |
| 3    | C, C  | 0                     | 0.0%                            |
| 4    | C, C  | 0                     | 0.0%                            |
| 5    | AN, W   | 0                     | 0.0%                            |
| 6    | BN, AN  | 0                     | 0.0%                            |
| 7    | AN, W   | 0                     | 0.0%                            |
| 8    | D, D  | 0                     | 0.0%                            |
| 9    | W, W  | 0                     | 0.0%                            |
| 10   | W, W  | 0                     | 0.0%                            |
| 11   | W, AN   | -1                    | 0.0%                            |
| 12   | D, D  | -1                    | -0.1%                           |
| 13   | W, W  | -3                    | 0.0%                            |
| 14   | D, D  | -1                    | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 2                     | 0.3%                            |
| 16             | D, C  | 0                     | 0.0%                            |
| 17             | C, C  | 0                     | 0.0%                            |
| 18             | C, C  | 0                     | 0.0%                            |
| 19             | C, C  | 0                     | 0.0%                            |
| 20             | AN, W   | 0                     | 0.0%                            |
| 21             | C, C  | 0                     | 0.0%                            |
| 22             | W, W  | 2                     | 0.1%                            |
| 23             | W, W  | 2                     | 0.4%                            |
| 24             | W, W  | 3                     | 0.1%                            |
| 25             | W, W  | -2                    | 0.0%                            |
| 26             | W, AN   | -3                    | 0.0%                            |
| 27             | AN, AN  | -1                    | -0.2%                           |
| 28             | D, D  | 0                     | 0.0%                            |
| 29             | D, D  | 0                     | 0.0%                            |
| 30             | AN, BN  | 0                     | 0.0%                            |
| 31             | BN, D   | 0                     | 0.0%                            |
| 32             | AN, W   | -1                    | 0.0%                            |
| 33             | W, W  | -1                    | 0.0%                            |
| 34             | D, C  | 0                     | 0.0%                            |
| 35             | C, C  | 0                     | 0.0%                            |
| 36             | D, BN   | 0                     | 0.0%                            |
| 37             | BN, AN  | 0                     | 0.0%                            |
| 38             | W, W  | 0                     | 0.0%                            |
| 39             | BN, D   | 0                     | 0.0%                            |
| 40             | D, C  | 0                     | 0.0%                            |
| 41             | C, C  | 0                     | 0.0%                            |
| 42             | C, C  | 0                     | 0.0%                            |
| <b>Average</b> |   | <b>0</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>3</b>              | <b>0.4%</b>                     |
| <b>Minimum</b> |   | <b>-3</b>             | <b>-0.2%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-272. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 20 (SR20) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 0                     | 0.0%                            |
| 2    | W, W  | 0                     | 0.0%                            |
| 3    | C, C  | 0                     | 0.0%                            |
| 4    | C, C  | 0                     | 0.0%                            |
| 5    | AN, W   | 0                     | 0.0%                            |
| 6    | BN, AN  | 0                     | 0.0%                            |
| 7    | AN, W   | 0                     | 0.0%                            |
| 8    | D, D  | 1                     | 0.0%                            |
| 9    | W, W  | 0                     | 0.0%                            |
| 10   | W, W  | 0                     | 0.0%                            |
| 11   | W, AN   | 0                     | 0.0%                            |
| 12   | D, D  | 1                     | 0.0%                            |
| 13   | W, W  | 0                     | 0.0%                            |
| 14   | D, D  | 0                     | 0.0%                            |
| 15   | C, C  | 1                     | 0.0%                            |
| 16   | D, C  | 0                     | 0.0%                            |
| 17   | C, C  | 0                     | 0.0%                            |
| 18   | C, C  | 0                     | 0.0%                            |
| 19   | C, C  | 0                     | 0.0%                            |
| 20   | AN, W   | 0                     | 0.0%                            |
| 21   | C, C  | 0                     | 0.0%                            |
| 22   | W, W  | 0                     | 0.0%                            |
| 23   | W, W  | 0                     | 0.0%                            |
| 24   | W, W  | 0                     | 0.0%                            |
| 25   | W, W  | 0                     | 0.0%                            |
| 26   | W, AN   | 1                     | 0.0%                            |
| 27   | AN, AN  | 0                     | 0.0%                            |
| 28   | D, D  | 1                     | 0.0%                            |
| 29   | D, D  | 1                     | 0.0%                            |
| 30   | AN, BN  | 0                     | 0.0%                            |
| 31   | BN, D   | 0                     | 0.0%                            |
| 32   | AN, W   | 0                     | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 1                     | 0.0%                            |
| 34             | D, C  | 1                     | 0.0%                            |
| 35             | C, C  | 0                     | 0.0%                            |
| 36             | D, BN   | 1                     | 0.0%                            |
| 37             | BN, AN  | 0                     | 0.0%                            |
| 38             | W, W  | 0                     | 0.0%                            |
| 39             | BN, D   | 0                     | 0.0%                            |
| 40             | D, C  | 1                     | 0.0%                            |
| 41             | C, C  | 0                     | 0.0%                            |
| 42             | C, C  | 1                     | 0.0%                            |
| <b>Average</b> |   | <b>0</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>1</b>              | <b>0.0%</b>                     |
| <b>Minimum</b> |   | <b>0</b>              | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-273. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 21 (SR21) for Alternative 2 Without TUCP Delta VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 0                     | 0.0%                            |
| 2    | W, W  | 0                     | 0.0%                            |
| 3    | C, C  | 0                     | 0.0%                            |
| 4    | C, C  | 0                     | 0.0%                            |
| 5    | AN, W   | 0                     | 0.0%                            |
| 6    | BN, AN  | 0                     | 0.0%                            |
| 7    | AN, W   | 0                     | 0.0%                            |
| 8    | D, D  | 0                     | 0.0%                            |
| 9    | W, W  | 0                     | 0.0%                            |
| 10   | W, W  | 1                     | 0.0%                            |
| 11   | W, AN   | 0                     | 0.0%                            |
| 12   | D, D  | 0                     | 0.0%                            |
| 13   | W, W  | 0                     | 0.0%                            |
| 14   | D, D  | 0                     | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v2 minus NAA (AF) | Alt2v2 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 0                     | 0.0%                            |
| 16             | D, C  | 0                     | 0.0%                            |
| 17             | C, C  | 0                     | 0.0%                            |
| 18             | C, C  | 0                     | 0.0%                            |
| 19             | C, C  | 0                     | 0.0%                            |
| 20             | AN, W   | 0                     | 0.0%                            |
| 21             | C, C  | 0                     | 0.0%                            |
| 22             | W, W  | 0                     | 0.0%                            |
| 23             | W, W  | 0                     | 0.0%                            |
| 24             | W, W  | 0                     | 0.0%                            |
| 25             | W, W  | 1                     | 0.0%                            |
| 26             | W, AN   | 1                     | 0.0%                            |
| 27             | AN, AN  | 0                     | 0.0%                            |
| 28             | D, D  | 0                     | 0.0%                            |
| 29             | D, D  | 0                     | 0.0%                            |
| 30             | AN, BN  | 0                     | 0.0%                            |
| 31             | BN, D   | 0                     | 0.0%                            |
| 32             | AN, W   | 0                     | 0.0%                            |
| 33             | W, W  | 2                     | 0.0%                            |
| 34             | D, C  | 1                     | 0.0%                            |
| 35             | C, C  | 0                     | 0.0%                            |
| 36             | D, BN   | 0                     | 0.0%                            |
| 37             | BN, AN  | 0                     | 0.0%                            |
| 38             | W, W  | 0                     | 0.0%                            |
| 39             | BN, D   | 0                     | 0.0%                            |
| 40             | D, C  | 0                     | 0.0%                            |
| 41             | C, C  | 0                     | 0.0%                            |
| 42             | C, C  | 0                     | 0.0%                            |
| <b>Average</b> |   | <b>0</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>2</b>              | <b>0.0%</b>                     |
| <b>Minimum</b> |   | <b>0</b>              | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



**I-1.2.6 Changes in Groundwater-Surface Water Interaction Flow, Alternative 2 without TUCP Systemwide VA Compared to No Action Alternative**

Table I.1-274 through Table I.1-294 provide the annual simulated groundwater-surface water interaction flow through the model simulation period for each of the 21 model subregions for Alternative 2 without TUCP Systemwide VA compared to the No Action Alternative.

Table I.1-274. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 1 (SR1) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 1,049                 | 0.3%                            |
| 2    | W, W  | -620                  | -0.2%                           |
| 3    | C, C  | -711                  | -0.2%                           |
| 4    | C, C  | 15,518                | 6.0%                            |
| 5    | AN, W   | 7,224                 | 3.2%                            |
| 6    | BN, AN  | 4,182                 | 1.6%                            |
| 7    | AN, W   | -151                  | -0.1%                           |
| 8    | D, D  | 411                   | 0.2%                            |
| 9    | W, W  | 1,526                 | 0.6%                            |
| 10   | W, W  | -1,028                | -0.3%                           |
| 11   | W, AN   | -1,171                | -0.3%                           |
| 12   | D, D  | 621                   | 0.2%                            |
| 13   | W, W  | 298                   | 0.1%                            |
| 14   | D, D  | 955                   | 0.3%                            |
| 15   | C, C  | 1,724                 | 0.6%                            |
| 16   | D, C  | 1,259                 | 0.5%                            |
| 17   | C, C  | 787                   | 0.3%                            |
| 18   | C, C  | 11,190                | 5.5%                            |
| 19   | C, C  | 21,840                | 11.3%                           |
| 20   | AN, W   | 374                   | 0.2%                            |
| 21   | C, C  | 711                   | 0.3%                            |
| 22   | W, W  | 1,349                 | 0.6%                            |
| 23   | W, W  | 250                   | 0.1%                            |
| 24   | W, W  | 2,405                 | 0.9%                            |
| 25   | W, W  | 579                   | 0.2%                            |
| 26   | W, AN   | -1,301                | -0.4%                           |
| 27   | AN, AN  | 1,746                 | 0.6%                            |
| 28   | D, D  | 1,646                 | 0.6%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 29             | D, D  | 1,073                 | 0.4%                            |
| 30             | AN, BN  | -865                  | -0.3%                           |
| 31             | BN, D   | 51                    | 0.0%                            |
| 32             | AN, W   | 615                   | 0.2%                            |
| 33             | W, W  | 2,190                 | 0.8%                            |
| 34             | D, C  | -2,970                | -1.0%                           |
| 35             | C, C  | 1,692                 | 0.6%                            |
| 36             | D, BN   | 262                   | 0.1%                            |
| 37             | BN, AN  | 632                   | 0.3%                            |
| 38             | W, W  | 939                   | 0.4%                            |
| 39             | BN, D   | -239                  | -0.1%                           |
| 40             | D, C  | 1,248                 | 0.5%                            |
| 41             | C, C  | 12,332                | 5.2%                            |
| 42             | C, C  | 4,733                 | 2.2%                            |
| <b>Average</b> |   | <b>2,247</b>          | <b>1.0%</b>                     |
| <b>Maximum</b> |   | <b>21,840</b>         | <b>11.3%</b>                    |
| <b>Minimum</b> |   | <b>-2,970</b>         | <b>-1.0%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-275. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 2 (SR2) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 3,735                 | 3.9%                            |
| 2    | W, W  | 100                   | 0.2%                            |
| 3    | C, C  | 831                   | 6.4%                            |
| 4    | C, C  | 8,014                 | 65.5%                           |
| 5    | AN, W   | -1,952                | -0.5%                           |
| 6    | BN, AN  | 8,850                 | 6.5%                            |
| 7    | AN, W   | 2,869                 | 1.6%                            |
| 8    | D, D  | 3,622                 | 3.0%                            |
| 9    | W, W  | 5,779                 | 4.0%                            |
| 10   | W, W  | -59                   | -0.4%                           |
| 11   | W, AN   | -1,815                | -5.9%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 12             | D, D  | 2,284                 | 7.5%                            |
| 13             | W, W  | 3,510                 | 5.4%                            |
| 14             | D, D  | 3,509                 | 5.2%                            |
| 15             | C, C  | 7,040                 | 5.0%                            |
| 16             | D, C  | 9,739                 | 4.9%                            |
| 17             | C, C  | 6,690                 | 5.9%                            |
| 18             | C, C  | 3,543                 | 2.1%                            |
| 19             | C, C  | 22,168                | 8.8%                            |
| 20             | AN, W   | 442                   | 0.1%                            |
| 21             | C, C  | 3,744                 | 4.2%                            |
| 22             | W, W  | 12,457                | 4.5%                            |
| 23             | W, W  | 6,346                 | 4.2%                            |
| 24             | W, W  | 7,318                 | 9.1%                            |
| 25             | W, W  | 2,407                 | 2.9%                            |
| 26             | W, AN   | -2,066                | -64.3%                          |
| 27             | AN, AN  | 3,898                 | 8.3%                            |
| 28             | D, D  | 4,512                 | 13.3%                           |
| 29             | D, D  | 5,018                 | 4.4%                            |
| 30             | AN, BN  | 347                   | 0.2%                            |
| 31             | BN, D   | 1,614                 | 2.1%                            |
| 32             | AN, W   | 2,370                 | 3.1%                            |
| 33             | W, W  | 4,298                 | 11.6%                           |
| 34             | D, C  | -3,707                | -16.1%                          |
| 35             | C, C  | 4,739                 | 5.4%                            |
| 36             | D, BN   | 4,710                 | 3.7%                            |
| 37             | BN, AN  | 2,543                 | 1.3%                            |
| 38             | W, W  | 5,267                 | 3.3%                            |
| 39             | BN, D   | 1,011                 | 1.6%                            |
| 40             | D, C  | 3,071                 | 2.4%                            |
| 41             | C, C  | 1,226                 | 1.1%                            |
| 42             | C, C  | 7,475                 | 3.4%                            |
| <b>Average</b> |   | <b>3,988</b>          | <b>3.3%</b>                     |
| <b>Maximum</b> |   | <b>22,168</b>         | <b>65.5%</b>                    |
| <b>Minimum</b> |   | <b>-3,707</b>         | <b>-64.3%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-276. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 3 (SR3) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 6,296                 | 6.5%                            |
| 2    | W, W  | 4,292                 | 4.6%                            |
| 3    | C, C  | 5,910                 | 6.9%                            |
| 4    | C, C  | 15,650                | 23.8%                           |
| 5    | AN, W   | 16,748                | 34.3%                           |
| 6    | BN, AN  | 11,841                | 16.9%                           |
| 7    | AN, W   | 10,034                | 13.7%                           |
| 8    | D, D  | 10,270                | 13.3%                           |
| 9    | W, W  | 9,182                 | 10.6%                           |
| 10   | W, W  | 5,073                 | 4.9%                            |
| 11   | W, AN   | 3,907                 | 3.5%                            |
| 12   | D, D  | 5,161                 | 5.4%                            |
| 13   | W, W  | 7,615                 | 8.8%                            |
| 14   | D, D  | 6,222                 | 7.3%                            |
| 15   | C, C  | 9,057                 | 11.5%                           |
| 16   | D, C  | 8,864                 | 12.7%                           |
| 17   | C, C  | 9,734                 | 14.3%                           |
| 18   | C, C  | 18,020                | 36.2%                           |
| 19   | C, C  | 18,407                | 46.4%                           |
| 20   | AN, W   | 8,256                 | 18.5%                           |
| 21   | C, C  | 11,134                | 16.8%                           |
| 22   | W, W  | 11,839                | 20.5%                           |
| 23   | W, W  | 7,705                 | 10.0%                           |
| 24   | W, W  | 6,315                 | 7.3%                            |
| 25   | W, W  | 5,312                 | 6.0%                            |
| 26   | W, AN   | 4,712                 | 4.5%                            |
| 27   | AN, AN  | 5,821                 | 6.4%                            |
| 28   | D, D  | 8,883                 | 10.0%                           |
| 29   | D, D  | 9,728                 | 11.4%                           |
| 30   | AN, BN  | 8,769                 | 10.1%                           |
| 31   | BN, D   | 9,013                 | 9.8%                            |
| 32   | AN, W   | 9,296                 | 10.0%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 7,655                 | 7.6%                            |
| 34             | D, C  | 5,660                 | 5.8%                            |
| 35             | C, C  | 9,372                 | 10.7%                           |
| 36             | D, BN   | 10,191                | 13.3%                           |
| 37             | BN, AN  | 8,299                 | 11.3%                           |
| 38             | W, W  | 7,528                 | 8.4%                            |
| 39             | BN, D   | 5,771                 | 6.5%                            |
| 40             | D, C  | 8,078                 | 9.6%                            |
| 41             | C, C  | 23,096                | 32.8%                           |
| 42             | C, C  | 6,296                 | 37.7%                           |
| <b>Average</b> |   | <b>9,357</b>          | <b>13.5%</b>                    |
| <b>Maximum</b> |   | <b>23,096</b>         | <b>46.4%</b>                    |
| <b>Minimum</b> |   | <b>3,907</b>          | <b>3.5%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-277. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 4 (SR4) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 18,853                | 4.4%                            |
| 2    | W, W  | 9,580                 | 2.3%                            |
| 3    | C, C  | 10,248                | 2.8%                            |
| 4    | C, C  | 56,060                | 19.3%                           |
| 5    | AN, W   | 34,432                | 11.1%                           |
| 6    | BN, AN  | 41,116                | 10.7%                           |
| 7    | AN, W   | 23,305                | 5.7%                            |
| 8    | D, D  | 26,644                | 7.8%                            |
| 9    | W, W  | 25,995                | 5.8%                            |
| 10   | W, W  | 6,407                 | 1.4%                            |
| 11   | W, AN   | -2,315                | -0.5%                           |
| 12   | D, D  | 12,098                | 3.1%                            |
| 13   | W, W  | 16,292                | 3.7%                            |
| 14   | D, D  | 12,731                | 3.7%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 20,150                | 5.4%                            |
| 16             | D, C  | 19,256                | 5.8%                            |
| 17             | C, C  | 20,753                | 5.5%                            |
| 18             | C, C  | 44,330                | 14.0%                           |
| 19             | C, C  | 78,262                | 27.2%                           |
| 20             | AN, W   | 11,055                | 3.1%                            |
| 21             | C, C  | 23,846                | 7.1%                            |
| 22             | W, W  | 19,587                | 5.1%                            |
| 23             | W, W  | 7,175                 | 2.0%                            |
| 24             | W, W  | 11,736                | 3.0%                            |
| 25             | W, W  | 5,292                 | 1.3%                            |
| 26             | W, AN   | -3,920                | -0.9%                           |
| 27             | AN, AN  | 17,795                | 4.5%                            |
| 28             | D, D  | 28,616                | 7.2%                            |
| 29             | D, D  | 30,636                | 7.8%                            |
| 30             | AN, BN  | 23,270                | 5.9%                            |
| 31             | BN, D   | 26,157                | 6.8%                            |
| 32             | AN, W   | 30,398                | 7.0%                            |
| 33             | W, W  | 22,983                | 5.4%                            |
| 34             | D, C  | 3,965                 | 1.1%                            |
| 35             | C, C  | 30,674                | 7.8%                            |
| 36             | D, BN   | 27,425                | 7.5%                            |
| 37             | BN, AN  | 26,464                | 7.0%                            |
| 38             | W, W  | 21,310                | 5.2%                            |
| 39             | BN, D   | 11,572                | 3.1%                            |
| 40             | D, C  | 24,054                | 6.4%                            |
| 41             | C, C  | 55,944                | 16.3%                           |
| 42             | C, C  | 49,782                | 16.4%                           |
| <b>Average</b> |   | <b>23,334</b>         | <b>6.6%</b>                     |
| <b>Maximum</b> |   | <b>78,262</b>         | <b>27.2%</b>                    |
| <b>Minimum</b> |   | <b>-3,920</b>         | <b>-0.9%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-278. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 5 (SR5) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 3,202                 | 0.8%                            |
| 2    | W, W  | 3,518                 | 0.9%                            |
| 3    | C, C  | 8,767                 | 2.2%                            |
| 4    | C, C  | 1,798                 | 0.7%                            |
| 5    | AN, W   | 19,002                | 11.9%                           |
| 6    | BN, AN  | 596                   | 0.2%                            |
| 7    | AN, W   | 13,083                | 3.4%                            |
| 8    | D, D  | 6,128                 | 1.7%                            |
| 9    | W, W  | 7,735                 | 1.8%                            |
| 10   | W, W  | 4,289                 | 0.7%                            |
| 11   | W, AN   | -1,328                | -0.3%                           |
| 12   | D, D  | 10,782                | 2.5%                            |
| 13   | W, W  | 2,277                 | 0.5%                            |
| 14   | D, D  | 4,912                 | 1.4%                            |
| 15   | C, C  | 3,538                 | 1.1%                            |
| 16   | D, C  | 21,129                | 7.6%                            |
| 17   | C, C  | -2,928                | -0.9%                           |
| 18   | C, C  | 9,219                 | 3.8%                            |
| 19   | C, C  | 13,382                | 5.9%                            |
| 20   | AN, W   | 24,880                | 9.4%                            |
| 21   | C, C  | 12,682                | 3.7%                            |
| 22   | W, W  | 12,134                | 3.6%                            |
| 23   | W, W  | 6,463                 | 1.7%                            |
| 24   | W, W  | 2,306                 | 0.5%                            |
| 25   | W, W  | 1,979                 | 0.4%                            |
| 26   | W, AN   | 1,462                 | 0.3%                            |
| 27   | AN, AN  | 2,420                 | 0.6%                            |
| 28   | D, D  | 7,368                 | 1.8%                            |
| 29   | D, D  | 20,502                | 5.4%                            |
| 30   | AN, BN  | -650                  | -0.2%                           |
| 31   | BN, D   | 8,879                 | 2.2%                            |
| 32   | AN, W   | 8,969                 | 2.1%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 1,009                 | 0.2%                            |
| 34             | D, C  | 17,843                | 4.2%                            |
| 35             | C, C  | 143                   | 0.0%                            |
| 36             | D, BN   | 10,806                | 3.5%                            |
| 37             | BN, AN  | -1,556                | -0.5%                           |
| 38             | W, W  | 3,681                 | 0.9%                            |
| 39             | BN, D   | 3,230                 | 0.9%                            |
| 40             | D, C  | 20,030                | 5.3%                            |
| 41             | C, C  | -498                  | -0.2%                           |
| 42             | C, C  | 10,829                | 5.1%                            |
| <b>Average</b> |   | <b>7,238</b>          | <b>2.3%</b>                     |
| <b>Maximum</b> |   | <b>24,880</b>         | <b>11.9%</b>                    |
| <b>Minimum</b> |   | <b>-2,928</b>         | <b>-0.9%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-279. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 6 (SR6) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -1,660                | -2.9%                           |
| 2    | W, W  | -1,366                | -1.8%                           |
| 3    | C, C  | 437                   | 0.4%                            |
| 4    | C, C  | -3,314                | -2.4%                           |
| 5    | AN, W   | -5,293                | -2.3%                           |
| 6    | BN, AN  | -1,558                | -1.0%                           |
| 7    | AN, W   | 397                   | 0.4%                            |
| 8    | D, D  | -2,299                | -1.6%                           |
| 9    | W, W  | 1,366                 | 2.3%                            |
| 10   | W, W  | -509                  | -2.4%                           |
| 11   | W, AN   | -2,242                | -7.9%                           |
| 12   | D, D  | 884                   | 1.3%                            |
| 13   | W, W  | -333                  | -0.7%                           |
| 14   | D, D  | -47                   | 0.0%                            |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | -1,465                | -1.1%                           |
| 16             | D, C  | -325                  | -0.2%                           |
| 17             | C, C  | -2,057                | -1.7%                           |
| 18             | C, C  | -6,957                | -3.9%                           |
| 19             | C, C  | -2,636                | -1.3%                           |
| 20             | AN, W   | -3,804                | -1.5%                           |
| 21             | C, C  | -610                  | -0.4%                           |
| 22             | W, W  | -1,189                | -0.6%                           |
| 23             | W, W  | -1,552                | -1.2%                           |
| 24             | W, W  | -891                  | -0.9%                           |
| 25             | W, W  | -1,505                | -2.6%                           |
| 26             | W, AN   | -2,974                | -5.1%                           |
| 27             | AN, AN  | -1,625                | -2.0%                           |
| 28             | D, D  | -1,250                | -1.4%                           |
| 29             | D, D  | 795                   | 0.8%                            |
| 30             | AN, BN  | -3,584                | -3.5%                           |
| 31             | BN, D   | -1,392                | -1.4%                           |
| 32             | AN, W   | -997                  | -1.5%                           |
| 33             | W, W  | -1,008                | -2.4%                           |
| 34             | D, C  | -1,489                | -1.5%                           |
| 35             | C, C  | -1,385                | -1.4%                           |
| 36             | D, BN   | 7,626                 | 6.3%                            |
| 37             | BN, AN  | -13,592               | -9.7%                           |
| 38             | W, W  | -5,598                | -6.9%                           |
| 39             | BN, D   | -4,679                | -4.0%                           |
| 40             | D, C  | -3,952                | -2.6%                           |
| 41             | C, C  | -7,198                | -5.2%                           |
| 42             | C, C  | -4,637                | -2.1%                           |
| <b>Average</b> |   | <b>-2,035</b>         | <b>-1.9%</b>                    |
| <b>Maximum</b> |   | <b>7,626</b>          | <b>6.3%</b>                     |
| <b>Minimum</b> |   | <b>-13,592</b>        | <b>-9.7%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-280. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 7 (SR7) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 247                   | 1.7%                            |
| 2    | W, W  | 2,220                 | 9.1%                            |
| 3    | C, C  | 1,991                 | 11.3%                           |
| 4    | C, C  | -3,236                | -10.4%                          |
| 5    | AN, W   | 2,822                 | 6.2%                            |
| 6    | BN, AN  | 811                   | 32.9%                           |
| 7    | AN, W   | 4,347                 | 54.8%                           |
| 8    | D, D  | 5,839                 | 81.8%                           |
| 9    | W, W  | 2,689                 | 63.2%                           |
| 10   | W, W  | 2,733                 | 7.0%                            |
| 11   | W, AN   | 1,737                 | 5.3%                            |
| 12   | D, D  | 4,449                 | 14.0%                           |
| 13   | W, W  | 1,220                 | 3.4%                            |
| 14   | D, D  | 3,830                 | 31.7%                           |
| 15   | C, C  | 2,307                 | 219.6%                          |
| 16   | D, C  | 8,671                 | 47.7%                           |
| 17   | C, C  | 1,681                 | 82.2%                           |
| 18   | C, C  | -1,810                | -8.0%                           |
| 19   | C, C  | 6,590                 | 24.9%                           |
| 20   | AN, W   | 4,998                 | 18.2%                           |
| 21   | C, C  | 3,339                 | 46.0%                           |
| 22   | W, W  | 3,036                 | 12.6%                           |
| 23   | W, W  | 2,344                 | 13.5%                           |
| 24   | W, W  | 3,316                 | 40.7%                           |
| 25   | W, W  | 2,517                 | 28.6%                           |
| 26   | W, AN   | 1,706                 | 11.8%                           |
| 27   | AN, AN  | 2,996                 | 28.1%                           |
| 28   | D, D  | 2,306                 | 13.9%                           |
| 29   | D, D  | 5,481                 | 9417.5%                         |
| 30   | AN, BN  | 292                   | 2.0%                            |
| 31   | BN, D   | 3,821                 | 82.6%                           |
| 32   | AN, W   | 1,474                 | 73.1%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 763                   | 16.4%                           |
| 34             | D, C  | 4,381                 | 165.9%                          |
| 35             | C, C  | 443                   | 16.8%                           |
| 36             | D, BN   | 5,061                 | 20.7%                           |
| 37             | BN, AN  | 796                   | 4.3%                            |
| 38             | W, W  | 1,887                 | 21.4%                           |
| 39             | BN, D   | 2,466                 | 25.1%                           |
| 40             | D, C  | 5,006                 | 113.7%                          |
| 41             | C, C  | -4,486                | -15.2%                          |
| 42             | C, C  | 6,092                 | 14.5%                           |
| <b>Average</b> |   | <b>2,599</b>          | <b>258.4%</b>                   |
| <b>Maximum</b> |   | <b>8,671</b>          | <b>9417.5%</b>                  |
| <b>Minimum</b> |   | <b>-4,486</b>         | <b>-15.2%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-281. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 8 (SR8) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 190                   | 0.1%                            |
| 2    | W, W  | 1,760                 | 0.7%                            |
| 3    | C, C  | 1,428                 | 0.7%                            |
| 4    | C, C  | -960                  | -0.5%                           |
| 5    | AN, W   | 2,804                 | 0.9%                            |
| 6    | BN, AN  | 3,600                 | 1.1%                            |
| 7    | AN, W   | 4,369                 | 1.4%                            |
| 8    | D, D  | 4,352                 | 1.9%                            |
| 9    | W, W  | 954                   | 0.3%                            |
| 10   | W, W  | 1,586                 | 0.6%                            |
| 11   | W, AN   | -981                  | -0.6%                           |
| 12   | D, D  | 3,214                 | 1.9%                            |
| 13   | W, W  | -1,541                | -0.7%                           |
| 14   | D, D  | 2,438                 | 1.4%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 678                   | 0.3%                            |
| 16             | D, C  | 2,577                 | 1.1%                            |
| 17             | C, C  | 1,662                 | 0.8%                            |
| 18             | C, C  | -1,130                | -0.5%                           |
| 19             | C, C  | 3,013                 | 1.2%                            |
| 20             | AN, W   | 1,597                 | 0.5%                            |
| 21             | C, C  | 670                   | 0.3%                            |
| 22             | W, W  | 783                   | 0.2%                            |
| 23             | W, W  | 225                   | 0.1%                            |
| 24             | W, W  | 2,597                 | 0.8%                            |
| 25             | W, W  | -1,029                | -0.4%                           |
| 26             | W, AN   | 1,936                 | 0.7%                            |
| 27             | AN, AN  | 1,212                 | 0.5%                            |
| 28             | D, D  | 1,790                 | 0.8%                            |
| 29             | D, D  | 1,241                 | 0.5%                            |
| 30             | AN, BN  | -2,321                | -1.0%                           |
| 31             | BN, D   | 2,686                 | 1.3%                            |
| 32             | AN, W   | -1,284                | -0.5%                           |
| 33             | W, W  | 909                   | 0.3%                            |
| 34             | D, C  | 1,515                 | 0.6%                            |
| 35             | C, C  | -375                  | -0.2%                           |
| 36             | D, BN   | 1,181                 | 0.5%                            |
| 37             | BN, AN  | -234                  | -0.1%                           |
| 38             | W, W  | -18                   | 0.0%                            |
| 39             | BN, D   | 999                   | 0.4%                            |
| 40             | D, C  | 891                   | 0.4%                            |
| 41             | C, C  | -1,101                | -0.5%                           |
| 42             | C, C  | 4,678                 | 1.8%                            |
| <b>Average</b> |   | <b>1,156</b>          | <b>0.5%</b>                     |
| <b>Maximum</b> |   | <b>4,678</b>          | <b>1.9%</b>                     |
| <b>Minimum</b> |   | <b>-2,321</b>         | <b>-1.0%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-282. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 9 (SR9) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 1,339                 | 0.4%                            |
| 2    | W, W  | 1,811                 | 0.4%                            |
| 3    | C, C  | 2,948                 | 0.6%                            |
| 4    | C, C  | -6,284                | -1.7%                           |
| 5    | AN, W   | 515                   | 0.3%                            |
| 6    | BN, AN  | -1,475                | -0.4%                           |
| 7    | AN, W   | 6,816                 | 2.5%                            |
| 8    | D, D  | 2,228                 | 0.6%                            |
| 9    | W, W  | 1,868                 | 0.7%                            |
| 10   | W, W  | 878                   | 0.2%                            |
| 11   | W, AN   | -2,110                | -0.5%                           |
| 12   | D, D  | 9,559                 | 2.0%                            |
| 13   | W, W  | -2,879                | -0.7%                           |
| 14   | D, D  | 4,165                 | 0.9%                            |
| 15   | C, C  | -1,910                | -0.5%                           |
| 16   | D, C  | 11,989                | 3.8%                            |
| 17   | C, C  | 5,140                 | 1.3%                            |
| 18   | C, C  | 3,632                 | 1.1%                            |
| 19   | C, C  | 22,476                | 7.5%                            |
| 20   | AN, W   | -18,064               | -8.8%                           |
| 21   | C, C  | 1,515                 | 0.4%                            |
| 22   | W, W  | -4,403                | -2.2%                           |
| 23   | W, W  | -2,696                | -0.9%                           |
| 24   | W, W  | 1,630                 | 0.4%                            |
| 25   | W, W  | 257                   | 0.1%                            |
| 26   | W, AN   | -3,555                | -0.8%                           |
| 27   | AN, AN  | 4,484                 | 1.1%                            |
| 28   | D, D  | 1,843                 | 0.4%                            |
| 29   | D, D  | 10,735                | 2.8%                            |
| 30   | AN, BN  | -9,098                | -2.7%                           |
| 31   | BN, D   | 3,316                 | 0.9%                            |
| 32   | AN, W   | 534                   | 0.1%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -283                  | -0.1%                           |
| 34             | D, C  | 5,869                 | 1.3%                            |
| 35             | C, C  | -4,601                | -1.1%                           |
| 36             | D, BN   | 6,158                 | 1.6%                            |
| 37             | BN, AN  | 1,616                 | 0.5%                            |
| 38             | W, W  | 250                   | 0.1%                            |
| 39             | BN, D   | 44                    | 0.0%                            |
| 40             | D, C  | 10,041                | 2.7%                            |
| 41             | C, C  | -8,496                | -2.0%                           |
| 42             | C, C  | 19,386                | 5.7%                            |
| <b>Average</b> |   | <b>1,838</b>          | <b>0.4%</b>                     |
| <b>Maximum</b> |   | <b>22,476</b>         | <b>7.5%</b>                     |
| <b>Minimum</b> |   | <b>-18,064</b>        | <b>-8.8%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-283. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 10 (SR10) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 3,804                 | 4.4%                            |
| 2    | W, W  | 5,176                 | 5.7%                            |
| 3    | C, C  | 4,915                 | 5.4%                            |
| 4    | C, C  | -17,901               | -79.8%                          |
| 5    | AN, W   | -8,510                | -50.5%                          |
| 6    | BN, AN  | 435                   | 0.6%                            |
| 7    | AN, W   | 3,505                 | 8.1%                            |
| 8    | D, D  | 4,136                 | 5.0%                            |
| 9    | W, W  | 6,016                 | 8.5%                            |
| 10   | W, W  | 4,212                 | 5.0%                            |
| 11   | W, AN   | 3,237                 | 2.7%                            |
| 12   | D, D  | 2,459                 | 2.0%                            |
| 13   | W, W  | 4,499                 | 5.5%                            |
| 14   | D, D  | 2,940                 | 2.6%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 3,380                 | 3.3%                            |
| 16             | D, C  | 4,558                 | 5.9%                            |
| 17             | C, C  | 4,854                 | 8.1%                            |
| 18             | C, C  | 1,672                 | 30.4%                           |
| 19             | C, C  | 1,622                 | 13.6%                           |
| 20             | AN, W   | 2,726                 | 14.0%                           |
| 21             | C, C  | 1,109                 | 3.4%                            |
| 22             | W, W  | 3,666                 | 61.3%                           |
| 23             | W, W  | 4,083                 | 7.4%                            |
| 24             | W, W  | 2,805                 | 3.9%                            |
| 25             | W, W  | 574                   | 0.8%                            |
| 26             | W, AN   | 871                   | 0.7%                            |
| 27             | AN, AN  | 1,770                 | 1.7%                            |
| 28             | D, D  | 2,898                 | 2.7%                            |
| 29             | D, D  | 3,598                 | 3.6%                            |
| 30             | AN, BN  | 5,013                 | 5.4%                            |
| 31             | BN, D   | 6,142                 | 6.2%                            |
| 32             | AN, W   | 9,016                 | 8.8%                            |
| 33             | W, W  | 5,184                 | 4.4%                            |
| 34             | D, C  | 4,528                 | 3.8%                            |
| 35             | C, C  | 4,661                 | 5.3%                            |
| 36             | D, BN   | 5,172                 | 6.2%                            |
| 37             | BN, AN  | 6,435                 | 8.9%                            |
| 38             | W, W  | 9,405                 | 8.4%                            |
| 39             | BN, D   | 6,302                 | 4.5%                            |
| 40             | D, C  | 4,127                 | 3.6%                            |
| 41             | C, C  | -9,979                | -21.0%                          |
| 42             | C, C  | -6,179                | -73.6%                          |
| <b>Average</b> |   | <b>2,594</b>          | <b>1.4%</b>                     |
| <b>Maximum</b> |   | <b>9,405</b>          | <b>61.3%</b>                    |
| <b>Minimum</b> |   | <b>-17,901</b>        | <b>-79.8%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-284. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 11 (SR11) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 899                   | 2.2%                            |
| 2    | W, W  | 1,110                 | 2.4%                            |
| 3    | C, C  | 1,203                 | 6.0%                            |
| 4    | C, C  | 19,738                | 20.7%                           |
| 5    | AN, W   | -10,738               | -14.9%                          |
| 6    | BN, AN  | 1,281                 | 4.1%                            |
| 7    | AN, W   | 755                   | 10.1%                           |
| 8    | D, D  | 1,880                 | 9.5%                            |
| 9    | W, W  | 804                   | 4.1%                            |
| 10   | W, W  | 718                   | 2.3%                            |
| 11   | W, AN   | 1,156                 | 1.2%                            |
| 12   | D, D  | 633                   | 0.9%                            |
| 13   | W, W  | -1,040                | -2.0%                           |
| 14   | D, D  | 2,829                 | 7.2%                            |
| 15   | C, C  | 1,526                 | 7.1%                            |
| 16   | D, C  | 2,070                 | 3.6%                            |
| 17   | C, C  | -239                  | -0.4%                           |
| 18   | C, C  | 1,851                 | 2.3%                            |
| 19   | C, C  | 1,172                 | 1.5%                            |
| 20   | AN, W   | -1,964                | -4.5%                           |
| 21   | C, C  | -3,375                | -7.3%                           |
| 22   | W, W  | -1,353                | -3.5%                           |
| 23   | W, W  | 343                   | 3.3%                            |
| 24   | W, W  | -3,277                | -15.6%                          |
| 25   | W, W  | 6,740                 | 15.1%                           |
| 26   | W, AN   | 2,212                 | 2.1%                            |
| 27   | AN, AN  | -253                  | -0.5%                           |
| 28   | D, D  | 1,937                 | 4.1%                            |
| 29   | D, D  | 1,442                 | 4.1%                            |
| 30   | AN, BN  | 1,785                 | 5.2%                            |
| 31   | BN, D   | 1,976                 | 5.4%                            |
| 32   | AN, W   | 6,679                 | 13.2%                           |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -1,515                | -2.3%                           |
| 34             | D, C  | 2,655                 | 3.7%                            |
| 35             | C, C  | 1,968                 | 42.1%                           |
| 36             | D, BN   | 2,308                 | 12.7%                           |
| 37             | BN, AN  | 2,470                 | 33.5%                           |
| 38             | W, W  | 2,551                 | 560.0%                          |
| 39             | BN, D   | 2,250                 | 2.7%                            |
| 40             | D, C  | 2,341                 | 17.4%                           |
| 41             | C, C  | 19,056                | 30.9%                           |
| 42             | C, C  | -11,817               | -13.0%                          |
| <b>Average</b> |   | <b>1,494</b>          | <b>18.5%</b>                    |
| <b>Maximum</b> |   | <b>19,738</b>         | <b>560.0%</b>                   |
| <b>Minimum</b> |   | <b>-11,817</b>        | <b>-15.6%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-285. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 12 (SR12) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 1,654                 | 1.9%                            |
| 2    | W, W  | 1,808                 | 2.3%                            |
| 3    | C, C  | 2,001                 | 1.9%                            |
| 4    | C, C  | 1,421                 | 0.8%                            |
| 5    | AN, W   | 1,295                 | 0.7%                            |
| 6    | BN, AN  | 1,904                 | 1.1%                            |
| 7    | AN, W   | 2,070                 | 1.5%                            |
| 8    | D, D  | 2,424                 | 2.1%                            |
| 9    | W, W  | 2,489                 | 2.6%                            |
| 10   | W, W  | 2,064                 | 2.6%                            |
| 11   | W, AN   | 1,764                 | 2.8%                            |
| 12   | D, D  | 1,580                 | 2.1%                            |
| 13   | W, W  | 1,657                 | 2.1%                            |
| 14   | D, D  | 1,734                 | 1.8%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 1,701                 | 1.2%                            |
| 16             | D, C  | 2,430                 | 1.2%                            |
| 17             | C, C  | 154                   | 0.1%                            |
| 18             | C, C  | 2,286                 | 1.0%                            |
| 19             | C, C  | 1,628                 | 0.7%                            |
| 20             | AN, W   | -375                  | -0.2%                           |
| 21             | C, C  | -149                  | -0.1%                           |
| 22             | W, W  | 1,706                 | 1.0%                            |
| 23             | W, W  | 1,755                 | 1.5%                            |
| 24             | W, W  | 1,468                 | 1.3%                            |
| 25             | W, W  | 1,108                 | 1.4%                            |
| 26             | W, AN   | 885                   | 1.7%                            |
| 27             | AN, AN  | 1,021                 | 1.2%                            |
| 28             | D, D  | 1,412                 | 1.6%                            |
| 29             | D, D  | 1,709                 | 1.7%                            |
| 30             | AN, BN  | 2,136                 | 2.2%                            |
| 31             | BN, D   | 2,489                 | 2.6%                            |
| 32             | AN, W   | 2,799                 | 4.0%                            |
| 33             | W, W  | 2,547                 | 4.4%                            |
| 34             | D, C  | 2,248                 | 3.2%                            |
| 35             | C, C  | 2,032                 | 1.6%                            |
| 36             | D, BN   | 3,052                 | 2.0%                            |
| 37             | BN, AN  | 2,862                 | 2.6%                            |
| 38             | W, W  | 3,286                 | 3.3%                            |
| 39             | BN, D   | 2,662                 | 4.5%                            |
| 40             | D, C  | 2,630                 | 2.2%                            |
| 41             | C, C  | 1,998                 | 1.0%                            |
| 42             | C, C  | 1,643                 | 0.7%                            |
| <b>Average</b> |   | <b>1,833</b>          | <b>1.8%</b>                     |
| <b>Maximum</b> |   | <b>3,286</b>          | <b>4.5%</b>                     |
| <b>Minimum</b> |   | <b>-375</b>           | <b>-0.2%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-286. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 13 (SR13) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 3,963                 | 0.7%                            |
| 2    | W, W  | 3,641                 | 0.6%                            |
| 3    | C, C  | 3,599                 | 0.6%                            |
| 4    | C, C  | -8,211                | -1.3%                           |
| 5    | AN, W   | -7,741                | -0.9%                           |
| 6    | BN, AN  | -11                   | 0.0%                            |
| 7    | AN, W   | 2,364                 | 0.3%                            |
| 8    | D, D  | 3,257                 | 0.5%                            |
| 9    | W, W  | 3,644                 | 0.5%                            |
| 10   | W, W  | 3,753                 | 0.4%                            |
| 11   | W, AN   | 4,096                 | 0.7%                            |
| 12   | D, D  | 4,068                 | 0.7%                            |
| 13   | W, W  | 3,196                 | 0.5%                            |
| 14   | D, D  | 3,880                 | 0.7%                            |
| 15   | C, C  | 4,070                 | 0.7%                            |
| 16   | D, C  | 3,871                 | 0.6%                            |
| 17   | C, C  | 3,838                 | 0.6%                            |
| 18   | C, C  | 2,334                 | 0.3%                            |
| 19   | C, C  | 2,751                 | 0.4%                            |
| 20   | AN, W   | 3,264                 | 0.5%                            |
| 21   | C, C  | 4,052                 | 0.6%                            |
| 22   | W, W  | 4,014                 | 0.5%                            |
| 23   | W, W  | 4,397                 | 0.6%                            |
| 24   | W, W  | 4,111                 | 0.5%                            |
| 25   | W, W  | 4,076                 | 0.6%                            |
| 26   | W, AN   | 3,923                 | 0.7%                            |
| 27   | AN, AN  | 3,849                 | 0.6%                            |
| 28   | D, D  | 3,902                 | 0.6%                            |
| 29   | D, D  | 3,971                 | 0.6%                            |
| 30   | AN, BN  | 3,974                 | 0.7%                            |
| 31   | BN, D   | 4,154                 | 0.7%                            |
| 32   | AN, W   | 4,540                 | 0.7%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 4,688                 | 0.7%                            |
| 34             | D, C  | 4,706                 | 0.8%                            |
| 35             | C, C  | 4,673                 | 0.7%                            |
| 36             | D, BN   | 4,656                 | 0.8%                            |
| 37             | BN, AN  | 4,906                 | 0.8%                            |
| 38             | W, W  | 5,444                 | 0.7%                            |
| 39             | BN, D   | 5,265                 | 0.8%                            |
| 40             | D, C  | 5,149                 | 0.8%                            |
| 41             | C, C  | -4,176                | -0.6%                           |
| 42             | C, C  | -3,117                | -0.4%                           |
| <b>Average</b> |   | <b>2,971</b>          | <b>0.5%</b>                     |
| <b>Maximum</b> |   | <b>5,444</b>          | <b>0.8%</b>                     |
| <b>Minimum</b> |   | <b>-8,211</b>         | <b>-1.3%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-287. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 14 (SR14) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 402                   | 0.7%                            |
| 2    | W, W  | -423                  | -0.8%                           |
| 3    | C, C  | 16                    | 0.0%                            |
| 4    | C, C  | -224                  | -0.5%                           |
| 5    | AN, W   | -94                   | -0.1%                           |
| 6    | BN, AN  | 108                   | 0.2%                            |
| 7    | AN, W   | -202                  | -0.3%                           |
| 8    | D, D  | 2                     | 0.0%                            |
| 9    | W, W  | 28                    | 0.0%                            |
| 10   | W, W  | -216                  | -0.2%                           |
| 11   | W, AN   | 222                   | 0.4%                            |
| 12   | D, D  | -96                   | -0.2%                           |
| 13   | W, W  | -203                  | -0.2%                           |
| 14   | D, D  | -439                  | -1.0%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | -67                   | -0.2%                           |
| 16             | D, C  | 14                    | 0.0%                            |
| 17             | C, C  | -126                  | -0.3%                           |
| 18             | C, C  | -123                  | -0.2%                           |
| 19             | C, C  | -21                   | 0.0%                            |
| 20             | AN, W   | -27                   | 0.0%                            |
| 21             | C, C  | -200                  | -0.4%                           |
| 22             | W, W  | -96                   | -0.1%                           |
| 23             | W, W  | 13                    | 0.0%                            |
| 24             | W, W  | 141                   | 0.2%                            |
| 25             | W, W  | 21                    | 0.0%                            |
| 26             | W, AN   | 22                    | 0.0%                            |
| 27             | AN, AN  | 32                    | 0.1%                            |
| 28             | D, D  | 27                    | 0.1%                            |
| 29             | D, D  | 13                    | 0.0%                            |
| 30             | AN, BN  | -44                   | -0.1%                           |
| 31             | BN, D   | -1                    | 0.0%                            |
| 32             | AN, W   | -28                   | 0.0%                            |
| 33             | W, W  | 172                   | 0.3%                            |
| 34             | D, C  | -8                    | 0.0%                            |
| 35             | C, C  | -204                  | -0.4%                           |
| 36             | D, BN   | -409                  | -0.9%                           |
| 37             | BN, AN  | -275                  | -0.5%                           |
| 38             | W, W  | -57                   | -0.1%                           |
| 39             | BN, D   | 58                    | 0.1%                            |
| 40             | D, C  | -121                  | -0.3%                           |
| 41             | C, C  | -149                  | -0.3%                           |
| 42             | C, C  | 14                    | 0.0%                            |
| <b>Average</b> |   | <b>-61</b>            | <b>-0.1%</b>                    |
| <b>Maximum</b> |   | <b>402</b>            | <b>0.7%</b>                     |
| <b>Minimum</b> |   | <b>-439</b>           | <b>-1.0%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-288. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 15 (SR15) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 8,635                 | 1.7%                            |
| 2    | W, W  | 9,220                 | 2.3%                            |
| 3    | C, C  | 4,819                 | 1.1%                            |
| 4    | C, C  | 4,040                 | 0.9%                            |
| 5    | AN, W   | 6,163                 | 0.6%                            |
| 6    | BN, AN  | 8,479                 | 1.8%                            |
| 7    | AN, W   | 16,391                | 2.0%                            |
| 8    | D, D  | 9,695                 | 2.4%                            |
| 9    | W, W  | 15,006                | 2.2%                            |
| 10   | W, W  | 16,712                | 3.1%                            |
| 11   | W, AN   | 11,081                | 2.8%                            |
| 12   | D, D  | 8,565                 | 2.1%                            |
| 13   | W, W  | 14,501                | 2.5%                            |
| 14   | D, D  | 10,651                | 2.6%                            |
| 15   | C, C  | 9,800                 | 2.7%                            |
| 16   | D, C  | 11,060                | 2.7%                            |
| 17   | C, C  | 8,906                 | 2.1%                            |
| 18   | C, C  | 8,314                 | 1.7%                            |
| 19   | C, C  | 7,489                 | 1.6%                            |
| 20   | AN, W   | 6,770                 | 1.4%                            |
| 21   | C, C  | 7,616                 | 1.5%                            |
| 22   | W, W  | 15,395                | 1.6%                            |
| 23   | W, W  | 10,935                | 1.6%                            |
| 24   | W, W  | 9,950                 | 1.6%                            |
| 25   | W, W  | 10,208                | 2.0%                            |
| 26   | W, AN   | 6,779                 | 1.9%                            |
| 27   | AN, AN  | 7,317                 | 1.7%                            |
| 28   | D, D  | 9,009                 | 2.2%                            |
| 29   | D, D  | 9,431                 | 2.5%                            |
| 30   | AN, BN  | 9,257                 | 2.3%                            |
| 31   | BN, D   | 9,218                 | 2.3%                            |
| 32   | AN, W   | 9,645                 | 1.5%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 18,670                | 2.8%                            |
| 34             | D, C  | 9,369                 | 2.2%                            |
| 35             | C, C  | 9,496                 | 2.4%                            |
| 36             | D, BN   | 11,958                | 2.8%                            |
| 37             | BN, AN  | 14,320                | 1.9%                            |
| 38             | W, W  | 21,044                | 2.7%                            |
| 39             | BN, D   | 11,638                | 2.3%                            |
| 40             | D, C  | 11,421                | 2.8%                            |
| 41             | C, C  | 8,828                 | 1.8%                            |
| 42             | C, C  | 5,572                 | 1.2%                            |
| <b>Average</b> |   | <b>10,318</b>         | <b>2.0%</b>                     |
| <b>Maximum</b> |   | <b>21,044</b>         | <b>3.1%</b>                     |
| <b>Minimum</b> |   | <b>4,040</b>          | <b>0.6%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-289. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 16 (SR16) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 530                   | 1.6%                            |
| 2    | W, W  | 516                   | 1.8%                            |
| 3    | C, C  | 517                   | 1.0%                            |
| 4    | C, C  | 1,118                 | 1.5%                            |
| 5    | AN, W   | 78                    | 0.1%                            |
| 6    | BN, AN  | 530                   | 1.3%                            |
| 7    | AN, W   | 578                   | 1.5%                            |
| 8    | D, D  | 592                   | 1.4%                            |
| 9    | W, W  | 669                   | 1.8%                            |
| 10   | W, W  | 690                   | 2.3%                            |
| 11   | W, AN   | 896                   | 5.4%                            |
| 12   | D, D  | 870                   | 3.2%                            |
| 13   | W, W  | 358                   | 1.3%                            |
| 14   | D, D  | 652                   | 2.4%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 744                   | 1.8%                            |
| 16             | D, C  | 670                   | 1.2%                            |
| 17             | C, C  | 808                   | 1.3%                            |
| 18             | C, C  | 806                   | 1.1%                            |
| 19             | C, C  | 788                   | 1.1%                            |
| 20             | AN, W   | 750                   | 1.3%                            |
| 21             | C, C  | 835                   | 1.5%                            |
| 22             | W, W  | 892                   | 1.8%                            |
| 23             | W, W  | 932                   | 2.2%                            |
| 24             | W, W  | 890                   | 2.5%                            |
| 25             | W, W  | 891                   | 2.8%                            |
| 26             | W, AN   | 919                   | 3.7%                            |
| 27             | AN, AN  | 940                   | 3.4%                            |
| 28             | D, D  | 954                   | 2.3%                            |
| 29             | D, D  | 991                   | 1.9%                            |
| 30             | AN, BN  | 1,002                 | 1.8%                            |
| 31             | BN, D   | 1,043                 | 1.9%                            |
| 32             | AN, W   | 1,079                 | 2.6%                            |
| 33             | W, W  | 1,128                 | 4.0%                            |
| 34             | D, C  | 1,090                 | 2.3%                            |
| 35             | C, C  | 1,157                 | 1.9%                            |
| 36             | D, BN   | 1,169                 | 1.9%                            |
| 37             | BN, AN  | 1,131                 | 2.0%                            |
| 38             | W, W  | 1,239                 | 3.7%                            |
| 39             | BN, D   | 1,194                 | 2.5%                            |
| 40             | D, C  | 1,122                 | 1.4%                            |
| 41             | C, C  | 1,058                 | 1.1%                            |
| 42             | C, C  | 484                   | 0.5%                            |
| <b>Average</b> |   | <b>841</b>            | <b>2.0%</b>                     |
| <b>Maximum</b> |   | <b>1,239</b>          | <b>5.4%</b>                     |
| <b>Minimum</b> |   | <b>78</b>             | <b>0.1%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-290. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 17 (SR17) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 559                   | 2.7%                            |
| 2    | W, W  | 530                   | 1.1%                            |
| 3    | C, C  | 441                   | 0.4%                            |
| 4    | C, C  | 81                    | 0.1%                            |
| 5    | AN, W   | 728                   | 0.7%                            |
| 6    | BN, AN  | 646                   | 8.7%                            |
| 7    | AN, W   | 656                   | 1.9%                            |
| 8    | D, D  | 618                   | 5.3%                            |
| 9    | W, W  | 675                   | 2.6%                            |
| 10   | W, W  | 834                   | 1.7%                            |
| 11   | W, AN   | 837                   | 0.8%                            |
| 12   | D, D  | 807                   | 10.1%                           |
| 13   | W, W  | 874                   | 6.4%                            |
| 14   | D, D  | 970                   | 15.1%                           |
| 15   | C, C  | 817                   | 1.5%                            |
| 16   | D, C  | 197                   | 0.3%                            |
| 17   | C, C  | 41                    | 0.1%                            |
| 18   | C, C  | 89                    | 0.1%                            |
| 19   | C, C  | 22                    | 0.0%                            |
| 20   | AN, W   | 780                   | 0.6%                            |
| 21   | C, C  | 810                   | 0.6%                            |
| 22   | W, W  | 991                   | 1.4%                            |
| 23   | W, W  | 1,140                 | 3.3%                            |
| 24   | W, W  | 1,172                 | 7.8%                            |
| 25   | W, W  | 1,110                 | 48.8%                           |
| 26   | W, AN   | 1,096                 | 5.8%                            |
| 27   | AN, AN  | 1,127                 | 6.5%                            |
| 28   | D, D  | 1,004                 | 1.8%                            |
| 29   | D, D  | 596                   | 0.9%                            |
| 30   | AN, BN  | 752                   | 0.9%                            |
| 31   | BN, D   | 621                   | 0.6%                            |
| 32   | AN, W   | 1,273                 | 1.7%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | 1,659                 | 5.6%                            |
| 34             | D, C  | 1,663                 | 2.6%                            |
| 35             | C, C  | 917                   | 1.1%                            |
| 36             | D, BN   | 790                   | 0.9%                            |
| 37             | BN, AN  | 1,533                 | 1.1%                            |
| 38             | W, W  | 2,166                 | 3.0%                            |
| 39             | BN, D   | 1,569                 | 3.0%                            |
| 40             | D, C  | 752                   | 0.6%                            |
| 41             | C, C  | 621                   | 0.5%                            |
| 42             | C, C  | 15                    | 0.0%                            |
| <b>Average</b> |   | <b>823</b>            | <b>3.8%</b>                     |
| <b>Maximum</b> |   | <b>2,166</b>          | <b>48.8%</b>                    |
| <b>Minimum</b> |   | <b>15</b>             | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-291. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 18 (SR18) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | -2                    | 0.0%                            |
| 2    | W, W  | -154                  | -0.2%                           |
| 3    | C, C  | -477                  | -1.5%                           |
| 4    | C, C  | -382                  | -0.9%                           |
| 5    | AN, W   | -478                  | -0.4%                           |
| 6    | BN, AN  | -1,887                | -0.9%                           |
| 7    | AN, W   | -941                  | -0.4%                           |
| 8    | D, D  | -378                  | -0.1%                           |
| 9    | W, W  | -439                  | -0.1%                           |
| 10   | W, W  | 948                   | 0.1%                            |
| 11   | W, AN   | 4,479                 | 0.4%                            |
| 12   | D, D  | 3,782                 | 0.5%                            |
| 13   | W, W  | -4,541                | -0.6%                           |
| 14   | D, D  | -2,460                | -0.4%                           |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | -1,125                | -0.3%                           |
| 16             | D, C  | -730                  | -0.5%                           |
| 17             | C, C  | -288                  | -4.9%                           |
| 18             | C, C  | 123                   | 0.2%                            |
| 19             | C, C  | 90                    | 0.1%                            |
| 20             | AN, W   | -38                   | 0.0%                            |
| 21             | C, C  | 456                   | 5.3%                            |
| 22             | W, W  | -495                  | -1.7%                           |
| 23             | W, W  | 296                   | 0.1%                            |
| 24             | W, W  | -15,839               | -7.1%                           |
| 25             | W, W  | -6,501                | -1.3%                           |
| 26             | W, AN   | -4,137                | -0.5%                           |
| 27             | AN, AN  | -4,625                | -0.8%                           |
| 28             | D, D  | -3,661                | -0.8%                           |
| 29             | D, D  | -3,371                | -1.6%                           |
| 30             | AN, BN  | -2,977                | -4.0%                           |
| 31             | BN, D   | -2,007                | -5.6%                           |
| 32             | AN, W   | -2,192                | -3.2%                           |
| 33             | W, W  | -310                  | -0.2%                           |
| 34             | D, C  | -160                  | -0.1%                           |
| 35             | C, C  | 198                   | 0.4%                            |
| 36             | D, BN   | 324                   | 0.4%                            |
| 37             | BN, AN  | 393                   | 0.5%                            |
| 38             | W, W  | -1,707                | -0.7%                           |
| 39             | BN, D   | 231                   | 0.1%                            |
| 40             | D, C  | -328                  | -0.9%                           |
| 41             | C, C  | 194                   | 0.3%                            |
| 42             | C, C  | 192                   | 0.2%                            |
| <b>Average</b> |   | <b>-1,212</b>         | <b>-0.7%</b>                    |
| <b>Maximum</b> |   | <b>4,479</b>          | <b>5.3%</b>                     |
| <b>Minimum</b> |   | <b>-15,839</b>        | <b>-7.1%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-292. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 19 (SR19) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 2                     | 0.1%                            |
| 2    | W, W  | 1                     | 0.0%                            |
| 3    | C, C  | 0                     | 0.0%                            |
| 4    | C, C  | 0                     | 0.0%                            |
| 5    | AN, W   | 2                     | 0.0%                            |
| 6    | BN, AN  | 1                     | 0.0%                            |
| 7    | AN, W   | 1                     | 0.0%                            |
| 8    | D, D  | 0                     | 0.0%                            |
| 9    | W, W  | 0                     | 0.0%                            |
| 10   | W, W  | 1                     | 0.0%                            |
| 11   | W, AN   | -1                    | 0.0%                            |
| 12   | D, D  | -1                    | -0.1%                           |
| 13   | W, W  | -2                    | 0.0%                            |
| 14   | D, D  | -1                    | 0.0%                            |
| 15   | C, C  | 0                     | 0.0%                            |
| 16   | D, C  | 0                     | 0.0%                            |
| 17   | C, C  | 0                     | 0.0%                            |
| 18   | C, C  | 0                     | 0.0%                            |
| 19   | C, C  | 0                     | 0.0%                            |
| 20   | AN, W   | 0                     | 0.0%                            |
| 21   | C, C  | 0                     | 0.0%                            |
| 22   | W, W  | 0                     | 0.0%                            |
| 23   | W, W  | 0                     | 0.0%                            |
| 24   | W, W  | 1                     | 0.0%                            |
| 25   | W, W  | -4                    | 0.0%                            |
| 26   | W, AN   | -4                    | 0.0%                            |
| 27   | AN, AN  | -1                    | -0.6%                           |
| 28   | D, D  | -1                    | -0.1%                           |
| 29   | D, D  | 0                     | 0.0%                            |
| 30   | AN, BN  | 0                     | 0.0%                            |
| 31   | BN, D   | 0                     | 0.0%                            |
| 32   | AN, W   | -1                    | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 33             | W, W  | -1                    | 0.0%                            |
| 34             | D, C  | 0                     | 0.0%                            |
| 35             | C, C  | 0                     | 0.0%                            |
| 36             | D, BN   | 0                     | 0.0%                            |
| 37             | BN, AN  | 0                     | 0.0%                            |
| 38             | W, W  | 0                     | 0.0%                            |
| 39             | BN, D   | 0                     | -0.1%                           |
| 40             | D, C  | 0                     | 0.0%                            |
| 41             | C, C  | 0                     | 0.0%                            |
| 42             | C, C  | 2                     | 0.0%                            |
| <b>Average</b> |   | <b>0</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>2</b>              | <b>0.1%</b>                     |
| <b>Minimum</b> |   | <b>-4</b>             | <b>-0.6%</b>                    |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-293. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 20 (SR20) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 0                     | 0.0%                            |
| 2    | W, W  | 0                     | 0.0%                            |
| 3    | C, C  | 0                     | 0.0%                            |
| 4    | C, C  | 0                     | 0.0%                            |
| 5    | AN, W   | 0                     | 0.0%                            |
| 6    | BN, AN  | 0                     | 0.0%                            |
| 7    | AN, W   | 0                     | 0.0%                            |
| 8    | D, D  | 1                     | 0.0%                            |
| 9    | W, W  | 0                     | 0.0%                            |
| 10   | W, W  | 0                     | 0.0%                            |
| 11   | W, AN   | 0                     | 0.0%                            |
| 12   | D, D  | 1                     | 0.0%                            |
| 13   | W, W  | 0                     | 0.0%                            |
| 14   | D, D  | 0                     | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 15             | C, C  | 1                     | 0.0%                            |
| 16             | D, C  | 0                     | 0.0%                            |
| 17             | C, C  | 0                     | 0.0%                            |
| 18             | C, C  | 0                     | 0.0%                            |
| 19             | C, C  | 0                     | 0.0%                            |
| 20             | AN, W   | 0                     | 0.0%                            |
| 21             | C, C  | 0                     | 0.0%                            |
| 22             | W, W  | 0                     | 0.0%                            |
| 23             | W, W  | 0                     | 0.0%                            |
| 24             | W, W  | 0                     | 0.0%                            |
| 25             | W, W  | 0                     | 0.0%                            |
| 26             | W, AN   | 1                     | 0.0%                            |
| 27             | AN, AN  | 1                     | 0.0%                            |
| 28             | D, D  | 1                     | 0.0%                            |
| 29             | D, D  | 1                     | 0.0%                            |
| 30             | AN, BN  | 1                     | 0.0%                            |
| 31             | BN, D   | 1                     | 0.0%                            |
| 32             | AN, W   | 1                     | 0.0%                            |
| 33             | W, W  | 1                     | 0.0%                            |
| 34             | D, C  | 1                     | 0.0%                            |
| 35             | C, C  | 1                     | 0.0%                            |
| 36             | D, BN   | 1                     | 0.0%                            |
| 37             | BN, AN  | 1                     | 0.0%                            |
| 38             | W, W  | 1                     | 0.0%                            |
| 39             | BN, D   | 0                     | 0.0%                            |
| 40             | D, C  | 1                     | 0.0%                            |
| 41             | C, C  | 0                     | 0.0%                            |
| 42             | C, C  | 1                     | 0.0%                            |
| <b>Average</b> |   | <b>1</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>1</b>              | <b>0.0%</b>                     |
| <b>Minimum</b> |   | <b>0</b>              | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-294. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 21 (SR21) for Alternative 2 Without TUCP Systemwide VA Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|------|---|-----------------------|---------------------------------|
| 1    | W, W  | 0                     | 0.0%                            |
| 2    | W, W  | 0                     | 0.0%                            |
| 3    | C, C  | 0                     | 0.0%                            |
| 4    | C, C  | 0                     | 0.0%                            |
| 5    | AN, W   | 0                     | 0.0%                            |
| 6    | BN, AN  | 0                     | 0.0%                            |
| 7    | AN, W   | 0                     | 0.0%                            |
| 8    | D, D  | 0                     | 0.0%                            |
| 9    | W, W  | 0                     | 0.0%                            |
| 10   | W, W  | 1                     | 0.0%                            |
| 11   | W, AN   | 0                     | 0.0%                            |
| 12   | D, D  | 0                     | 0.0%                            |
| 13   | W, W  | 0                     | 0.0%                            |
| 14   | D, D  | 0                     | 0.0%                            |
| 15   | C, C  | 0                     | 0.0%                            |
| 16   | D, C  | 0                     | 0.0%                            |
| 17   | C, C  | 0                     | 0.0%                            |
| 18   | C, C  | 0                     | 0.0%                            |
| 19   | C, C  | 0                     | 0.0%                            |
| 20   | AN, W   | 0                     | 0.0%                            |
| 21   | C, C  | 0                     | 0.0%                            |
| 22   | W, W  | 0                     | 0.0%                            |
| 23   | W, W  | 0                     | 0.0%                            |
| 24   | W, W  | 0                     | 0.0%                            |
| 25   | W, W  | 1                     | 0.0%                            |
| 26   | W, AN   | 1                     | 0.0%                            |
| 27   | AN, AN  | 0                     | 0.0%                            |
| 28   | D, D  | 0                     | 0.0%                            |
| 29   | D, D  | 0                     | 0.0%                            |
| 30   | AN, BN  | -1                    | 0.0%                            |
| 31   | BN, D   | -1                    | 0.0%                            |
| 32   | AN, W   | 0                     | 0.0%                            |
| 33   | W, W  | 1                     | 0.0%                            |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt2v3 minus NAA (AF) | Alt2v3 minus NAA (% Difference) |
|----------------|---|-----------------------|---------------------------------|
| 34             | D, C  | 0                     | 0.0%                            |
| 35             | C, C  | 0                     | 0.0%                            |
| 36             | D, BN   | 0                     | 0.0%                            |
| 37             | BN, AN  | 0                     | 0.0%                            |
| 38             | W, W  | 0                     | 0.0%                            |
| 39             | BN, D   | 0                     | 0.0%                            |
| 40             | D, C  | 0                     | 0.0%                            |
| 41             | C, C  | 0                     | 0.0%                            |
| 42             | C, C  | 0                     | 0.0%                            |
| <b>Average</b> |   | <b>0</b>              | <b>0.0%</b>                     |
| <b>Maximum</b> |   | <b>1</b>              | <b>0.0%</b>                     |
| <b>Minimum</b> |   | <b>-1</b>             | <b>0.0%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

### I-1.2.7 Changes in Groundwater-Surface Water Interaction Flow, Alternative 3 Compared to No Action Alternative

Table I.1-295 through Table I.1-315 provide the annual simulated groundwater-surface water interaction flow through the model simulation period for each of the 21 model subregions for Alternative 3 compared to the No Action Alternative.

Table I.1-295. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 1 (SR1) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -2,510              | -0.8%                         |
| 2    | W, W  | 2,015               | 0.7%                          |
| 3    | C, C  | 3,180               | 1.1%                          |
| 4    | C, C  | 32,470              | 12.5%                         |
| 5    | AN, W   | 28,140              | 12.4%                         |
| 6    | BN, AN  | 10,222              | 3.9%                          |
| 7    | AN, W   | -1,436              | -0.6%                         |
| 8    | D, D  | 4,046               | 1.6%                          |
| 9    | W, W  | -1,959              | -0.7%                         |
| 10   | W, W  | 2,357               | 0.8%                          |
| 11   | W, AN   | -1,596              | -0.5%                         |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 12             | D, D  | 541                 | 0.2%                          |
| 13             | W, W  | -323                | -0.1%                         |
| 14             | D, D  | 8,539               | 3.1%                          |
| 15             | C, C  | 2,337               | 0.9%                          |
| 16             | D, C  | 4,735               | 1.9%                          |
| 17             | C, C  | 2,586               | 1.1%                          |
| 18             | C, C  | 8,288               | 4.1%                          |
| 19             | C, C  | 16,282              | 8.5%                          |
| 20             | AN, W   | -559                | -0.3%                         |
| 21             | C, C  | 5,985               | 2.6%                          |
| 22             | W, W  | 2,115               | 1.0%                          |
| 23             | W, W  | 1,739               | 0.7%                          |
| 24             | W, W  | 1,096               | 0.4%                          |
| 25             | W, W  | 2,114               | 0.8%                          |
| 26             | W, AN   | 801                 | 0.3%                          |
| 27             | AN, AN  | 1,658               | 0.5%                          |
| 28             | D, D  | 5,210               | 1.8%                          |
| 29             | D, D  | -3,231              | -1.2%                         |
| 30             | AN, BN  | -1,183              | -0.4%                         |
| 31             | BN, D   | 4,294               | 1.5%                          |
| 32             | AN, W   | 5,579               | 2.0%                          |
| 33             | W, W  | -1,823              | -0.6%                         |
| 34             | D, C  | 4,960               | 1.6%                          |
| 35             | C, C  | 10,360              | 3.6%                          |
| 36             | D, BN   | 8,617               | 3.2%                          |
| 37             | BN, AN  | 669                 | 0.3%                          |
| 38             | W, W  | 902                 | 0.4%                          |
| 39             | BN, D   | 3,134               | 1.2%                          |
| 40             | D, C  | 3,238               | 1.2%                          |
| 41             | C, C  | 33,126              | 13.9%                         |
| 42             | C, C  | 51,178              | 24.1%                         |
| <b>Average</b> |   | <b>6,140</b>        | <b>2.6%</b>                   |
| <b>Maximum</b> |   | <b>51,178</b>       | <b>24.1%</b>                  |
| <b>Minimum</b> |   | <b>-3,231</b>       | <b>-1.2%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-296. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 2 (SR2) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -188                | -0.2%                         |
| 2    | W, W  | 4,474               | 9.7%                          |
| 3    | C, C  | 7,033               | 54.0%                         |
| 4    | C, C  | -91                 | -0.7%                         |
| 5    | AN, W   | 9,356               | 2.5%                          |
| 6    | BN, AN  | 15,525              | 11.4%                         |
| 7    | AN, W   | -2,968              | -1.6%                         |
| 8    | D, D  | 7,371               | 6.0%                          |
| 9    | W, W  | 623                 | 0.4%                          |
| 10   | W, W  | 3,528               | 22.4%                         |
| 11   | W, AN   | -3,195              | -10.3%                        |
| 12   | D, D  | 2,676               | 8.8%                          |
| 13   | W, W  | 3,130               | 4.8%                          |
| 14   | D, D  | 7,960               | 11.8%                         |
| 15   | C, C  | 8,197               | 5.9%                          |
| 16   | D, C  | 16,546              | 8.3%                          |
| 17   | C, C  | 9,991               | 8.8%                          |
| 18   | C, C  | 6,378               | 3.8%                          |
| 19   | C, C  | 17,427              | 6.9%                          |
| 20   | AN, W   | 1,407               | 0.4%                          |
| 21   | C, C  | 9,700               | 10.9%                         |
| 22   | W, W  | 15,033              | 5.5%                          |
| 23   | W, W  | 9,145               | 6.0%                          |
| 24   | W, W  | 7,305               | 9.1%                          |
| 25   | W, W  | 5,636               | 6.9%                          |
| 26   | W, AN   | 2,614               | 81.4%                         |
| 27   | AN, AN  | 2,364               | 5.0%                          |
| 28   | D, D  | 9,890               | 29.1%                         |
| 29   | D, D  | -427                | -0.4%                         |
| 30   | AN, BN  | 282                 | 0.2%                          |
| 31   | BN, D   | 5,244               | 6.8%                          |
| 32   | AN, W   | 9,358               | 12.2%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -271                | -0.7%                         |
| 34             | D, C  | 2,316               | 10.1%                         |
| 35             | C, C  | 13,039              | 14.8%                         |
| 36             | D, BN   | 12,557              | 9.8%                          |
| 37             | BN, AN  | 1,429               | 0.8%                          |
| 38             | W, W  | 6,566               | 4.1%                          |
| 39             | BN, D   | 6,370               | 10.2%                         |
| 40             | D, C  | 2,346               | 1.8%                          |
| 41             | C, C  | 6,935               | 6.2%                          |
| 42             | C, C  | 17,668              | 8.1%                          |
| <b>Average</b> |   | <b>6,197</b>        | <b>9.3%</b>                   |
| <b>Maximum</b> |   | <b>17,668</b>       | <b>81.4%</b>                  |
| <b>Minimum</b> |   | <b>-3,195</b>       | <b>-10.3%</b>                 |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-297. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 3 (SR3) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 6,432               | 6.6%                          |
| 2    | W, W  | 6,523               | 6.9%                          |
| 3    | C, C  | 9,549               | 11.1%                         |
| 4    | C, C  | 57,886              | 88.1%                         |
| 5    | AN, W   | 48,721              | 99.7%                         |
| 6    | BN, AN  | 18,597              | 26.5%                         |
| 7    | AN, W   | 11,149              | 15.3%                         |
| 8    | D, D  | 10,300              | 13.4%                         |
| 9    | W, W  | 8,870               | 10.2%                         |
| 10   | W, W  | 8,128               | 7.8%                          |
| 11   | W, AN   | 7,560               | 6.7%                          |
| 12   | D, D  | 7,473               | 7.8%                          |
| 13   | W, W  | 7,084               | 8.2%                          |
| 14   | D, D  | 11,280              | 13.3%                         |
| 15   | C, C  | 14,368              | 18.3%                         |

| Year           | WY Type (Sacramento Valley,<br>San Joaquin Valley) | Alt3 minus NAA<br>(AF) | Alt3 minus NAA<br>(% Difference) |
|----------------|--|------------------------|----------------------------------|
| 16             | D, C   | 14,358                 | 20.6%                            |
| 17             | C, C   | 12,961                 | 19.0%                            |
| 18             | C, C   | 18,853                 | 37.9%                            |
| 19             | C, C   | 20,739                 | 52.2%                            |
| 20             | AN, W  | 11,754                 | 26.3%                            |
| 21             | C, C   | 14,973                 | 22.6%                            |
| 22             | W, W   | 15,776                 | 27.3%                            |
| 23             | W, W   | 11,768                 | 15.2%                            |
| 24             | W, W   | 10,538                 | 12.1%                            |
| 25             | W, W   | 9,741                  | 11.0%                            |
| 26             | W, AN  | 8,340                  | 8.0%                             |
| 27             | AN, AN   | 7,386                  | 8.1%                             |
| 28             | D, D   | 10,633                 | 12.0%                            |
| 29             | D, D   | 9,430                  | 11.1%                            |
| 30             | AN, BN   | 8,126                  | 9.4%                             |
| 31             | BN, D  | 10,158                 | 11.0%                            |
| 32             | AN, W  | 8,299                  | 9.0%                             |
| 33             | W, W   | 6,490                  | 6.5%                             |
| 34             | D, C   | 10,014                 | 10.2%                            |
| 35             | C, C   | 12,723                 | 14.6%                            |
| 36             | D, BN  | 13,887                 | 18.1%                            |
| 37             | BN, AN   | 9,538                  | 13.0%                            |
| 38             | W, W   | 8,005                  | 9.0%                             |
| 39             | BN, D  | 7,676                  | 8.6%                             |
| 40             | D, C   | 10,583                 | 12.6%                            |
| 41             | C, C   | 57,672                 | 81.9%                            |
| 42             | C, C   | 77,073                 | 159.0%                           |
| <b>Average</b> |  | <b>15,510</b>          | <b>23.5%</b>                     |
| <b>Maximum</b> |  | <b>77,073</b>          | <b>159.0%</b>                    |
| <b>Minimum</b> |  | <b>6,432</b>           | <b>6.5%</b>                      |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-298. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 4 (SR4) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -117                | 0.0%                          |
| 2    | W, W  | 7,958               | 1.9%                          |
| 3    | C, C  | 26,234              | 7.2%                          |
| 4    | C, C  | 173,434             | 59.8%                         |
| 5    | AN, W   | 152,502             | 49.2%                         |
| 6    | BN, AN  | 50,018              | 13.0%                         |
| 7    | AN, W   | 1,911               | 0.5%                          |
| 8    | D, D  | 21,441              | 6.2%                          |
| 9    | W, W  | 17,505              | 3.9%                          |
| 10   | W, W  | 19,292              | 4.2%                          |
| 11   | W, AN   | 2,930               | 0.6%                          |
| 12   | D, D  | 14,096              | 3.6%                          |
| 13   | W, W  | 13,896              | 3.1%                          |
| 14   | D, D  | 28,095              | 8.1%                          |
| 15   | C, C  | 18,132              | 4.9%                          |
| 16   | D, C  | 32,440              | 9.8%                          |
| 17   | C, C  | 33,281              | 8.8%                          |
| 18   | C, C  | 56,327              | 17.8%                         |
| 19   | C, C  | 79,098              | 27.5%                         |
| 20   | AN, W   | 24,202              | 6.8%                          |
| 21   | C, C  | 39,173              | 11.6%                         |
| 22   | W, W  | 26,727              | 7.0%                          |
| 23   | W, W  | 14,416              | 3.9%                          |
| 24   | W, W  | 17,074              | 4.4%                          |
| 25   | W, W  | 17,700              | 4.4%                          |
| 26   | W, AN   | 9,489               | 2.2%                          |
| 27   | AN, AN  | 8,198               | 2.1%                          |
| 28   | D, D  | 34,130              | 8.6%                          |
| 29   | D, D  | 3,239               | 0.8%                          |
| 30   | AN, BN  | 2,544               | 0.6%                          |
| 31   | BN, D   | 14,899              | 3.9%                          |
| 32   | AN, W   | 22,014              | 5.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 11,710              | 2.7%                          |
| 34             | D, C  | 20,326              | 5.4%                          |
| 35             | C, C  | 38,544              | 9.8%                          |
| 36             | D, BN   | 35,377              | 9.7%                          |
| 37             | BN, AN  | 10,468              | 2.8%                          |
| 38             | W, W  | 20,510              | 5.0%                          |
| 39             | BN, D   | 11,224              | 3.0%                          |
| 40             | D, C  | 17,896              | 4.8%                          |
| 41             | C, C  | 178,984             | 52.2%                         |
| 42             | C, C  | 267,448             | 88.2%                         |
| <b>Average</b> |   | <b>37,971</b>       | <b>11.3%</b>                  |
| <b>Maximum</b> |   | <b>267,448</b>      | <b>88.2%</b>                  |
| <b>Minimum</b> |   | <b>-117</b>         | <b>0.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-299. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 5 (SR5) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 1,494               | 0.4%                          |
| 2    | W, W  | -4,376              | -1.1%                         |
| 3    | C, C  | 31,223              | 7.9%                          |
| 4    | C, C  | 29,383              | 12.2%                         |
| 5    | AN, W   | 2,421               | 1.5%                          |
| 6    | BN, AN  | 25,843              | 8.0%                          |
| 7    | AN, W   | -17,133             | -4.5%                         |
| 8    | D, D  | 27,694              | 7.8%                          |
| 9    | W, W  | -18,267             | -4.3%                         |
| 10   | W, W  | 39,440              | 6.8%                          |
| 11   | W, AN   | -23,715             | -5.1%                         |
| 12   | D, D  | 26,441              | 6.2%                          |
| 13   | W, W  | -5,240              | -1.3%                         |
| 14   | D, D  | 33,071              | 9.1%                          |
| 15   | C, C  | 34,239              | 11.0%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 15,859              | 5.7%                          |
| 17             | C, C  | 41,059              | 12.3%                         |
| 18             | C, C  | 47,618              | 19.5%                         |
| 19             | C, C  | 69,467              | 30.8%                         |
| 20             | AN, W   | 11,737              | 4.4%                          |
| 21             | C, C  | 52,427              | 15.2%                         |
| 22             | W, W  | 6,591               | 2.0%                          |
| 23             | W, W  | 8,026               | 2.1%                          |
| 24             | W, W  | 13,001              | 3.0%                          |
| 25             | W, W  | 40,259              | 8.5%                          |
| 26             | W, AN   | -21,429             | -4.9%                         |
| 27             | AN, AN  | -2,677              | -0.6%                         |
| 28             | D, D  | 35,655              | 8.5%                          |
| 29             | D, D  | 11,556              | 3.1%                          |
| 30             | AN, BN  | -16,040             | -4.7%                         |
| 31             | BN, D   | 3,862               | 1.0%                          |
| 32             | AN, W   | 17,295              | 4.0%                          |
| 33             | W, W  | 23,191              | 4.8%                          |
| 34             | D, C  | -2,137              | -0.5%                         |
| 35             | C, C  | 36,139              | 9.2%                          |
| 36             | D, BN   | 6,493               | 2.1%                          |
| 37             | BN, AN  | -22,868             | -7.2%                         |
| 38             | W, W  | 8,594               | 2.1%                          |
| 39             | BN, D   | -19,047             | -5.3%                         |
| 40             | D, C  | 37,103              | 9.8%                          |
| 41             | C, C  | 54,714              | 19.3%                         |
| 42             | C, C  | 84,960              | 39.9%                         |
| <b>Average</b> |   | <b>17,236</b>       | <b>5.7%</b>                   |
| <b>Maximum</b> |   | <b>84,960</b>       | <b>39.9%</b>                  |
| <b>Minimum</b> |   | <b>-23,715</b>      | <b>-7.2%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-300. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 6 (SR6) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -359                | -0.6%                         |
| 2    | W, W  | -118                | -0.2%                         |
| 3    | C, C  | 5,298               | 4.5%                          |
| 4    | C, C  | 3,854               | 2.7%                          |
| 5    | AN, W   | 1,880               | 0.8%                          |
| 6    | BN, AN  | 6,467               | 4.2%                          |
| 7    | AN, W   | -3,001              | -2.8%                         |
| 8    | D, D  | 6,165               | 4.3%                          |
| 9    | W, W  | -2,406              | -4.0%                         |
| 10   | W, W  | 5,487               | 25.6%                         |
| 11   | W, AN   | -5,492              | -19.3%                        |
| 12   | D, D  | 4,332               | 6.2%                          |
| 13   | W, W  | -1,264              | -2.7%                         |
| 14   | D, D  | 5,415               | 5.1%                          |
| 15   | C, C  | 1,476               | 1.2%                          |
| 16   | D, C  | 1,215               | 0.8%                          |
| 17   | C, C  | 2,706               | 2.2%                          |
| 18   | C, C  | -1,225              | -0.7%                         |
| 19   | C, C  | 3,016               | 1.5%                          |
| 20   | AN, W   | -8,941              | -3.5%                         |
| 21   | C, C  | 5,920               | 3.7%                          |
| 22   | W, W  | 2,670               | 1.4%                          |
| 23   | W, W  | -1,503              | -1.1%                         |
| 24   | W, W  | 2,422               | 2.4%                          |
| 25   | W, W  | 5,424               | 9.4%                          |
| 26   | W, AN   | -4,027              | -7.0%                         |
| 27   | AN, AN  | -139                | -0.2%                         |
| 28   | D, D  | 7,797               | 8.5%                          |
| 29   | D, D  | -2,159              | -2.0%                         |
| 30   | AN, BN  | -4,617              | -4.5%                         |
| 31   | BN, D   | 275                 | 0.3%                          |
| 32   | AN, W   | 2,900               | 4.3%                          |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 3,460               | 8.3%                          |
| 34             | D, C  | -1,296              | -1.3%                         |
| 35             | C, C  | 6,627               | 6.8%                          |
| 36             | D, BN   | 1,483               | 1.2%                          |
| 37             | BN, AN  | -2,247              | -1.6%                         |
| 38             | W, W  | 1,203               | 1.5%                          |
| 39             | BN, D   | -3,088              | -2.7%                         |
| 40             | D, C  | 3,638               | 2.4%                          |
| 41             | C, C  | 4,084               | 3.0%                          |
| 42             | C, C  | 9,837               | 4.5%                          |
| <b>Average</b> |   | <b>1,504</b>        | <b>1.5%</b>                   |
| <b>Maximum</b> |   | <b>9,837</b>        | <b>25.6%</b>                  |
| <b>Minimum</b> |   | <b>-8,941</b>       | <b>-19.3%</b>                 |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-301. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 7 (SR7) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -1,404              | -9.7%                         |
| 2    | W, W  | -1,918              | -7.9%                         |
| 3    | C, C  | 7,183               | 40.9%                         |
| 4    | C, C  | 2,349               | 7.6%                          |
| 5    | AN, W   | -4,044              | -8.9%                         |
| 6    | BN, AN  | 8,457               | 343.5%                        |
| 7    | AN, W   | -6,077              | -76.6%                        |
| 8    | D, D  | 5,157               | 72.2%                         |
| 9    | W, W  | -7,672              | -180.4%                       |
| 10   | W, W  | 10,922              | 28.1%                         |
| 11   | W, AN   | -8,639              | -26.1%                        |
| 12   | D, D  | 2,934               | 9.2%                          |
| 13   | W, W  | -1,698              | -4.8%                         |
| 14   | D, D  | 5,391               | 44.6%                         |
| 15   | C, C  | 4,133               | 393.5%                        |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 1,194               | 6.6%                          |
| 17             | C, C  | 4,358               | 213.1%                        |
| 18             | C, C  | 4,176               | 18.4%                         |
| 19             | C, C  | 7,783               | 29.4%                         |
| 20             | AN, W   | -10,848             | -39.6%                        |
| 21             | C, C  | 3,795               | 52.3%                         |
| 22             | W, W  | -2,443              | -10.1%                        |
| 23             | W, W  | -3,991              | -23.0%                        |
| 24             | W, W  | -696                | -8.6%                         |
| 25             | W, W  | 6,369               | 72.3%                         |
| 26             | W, AN   | -6,414              | -44.2%                        |
| 27             | AN, AN  | -1,104              | -10.3%                        |
| 28             | D, D  | 7,765               | 46.9%                         |
| 29             | D, D  | -1,097              | -1884.7%                      |
| 30             | AN, BN  | -5,603              | -38.3%                        |
| 31             | BN, D   | -2,429              | -52.5%                        |
| 32             | AN, W   | 2,719               | 134.8%                        |
| 33             | W, W  | 3,786               | 81.3%                         |
| 34             | D, C  | -2,672              | -101.2%                       |
| 35             | C, C  | 6,687               | 252.8%                        |
| 36             | D, BN   | 3,105               | 12.7%                         |
| 37             | BN, AN  | -8,494              | -46.4%                        |
| 38             | W, W  | 1,400               | 15.9%                         |
| 39             | BN, D   | -4,936              | -50.2%                        |
| 40             | D, C  | 5,614               | 127.5%                        |
| 41             | C, C  | 8,362               | 28.4%                         |
| 42             | C, C  | 7,817               | 18.7%                         |
| <b>Average</b> |   | <b>935</b>          | <b>-13.6%</b>                 |
| <b>Maximum</b> |   | <b>10,922</b>       | <b>393.5%</b>                 |
| <b>Minimum</b> |   | <b>-10,848</b>      | <b>-1884.7%</b>               |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-302. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 8 (SR8) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 5,328               | 2.0%                          |
| 2    | W, W  | 1,952               | 0.8%                          |
| 3    | C, C  | 4,156               | 2.0%                          |
| 4    | C, C  | 1,236               | 0.6%                          |
| 5    | AN, W   | 5,077               | 1.6%                          |
| 6    | BN, AN  | 472                 | 0.1%                          |
| 7    | AN, W   | 2,937               | 0.9%                          |
| 8    | D, D  | -476                | -0.2%                         |
| 9    | W, W  | 5,403               | 1.5%                          |
| 10   | W, W  | 19,670              | 7.9%                          |
| 11   | W, AN   | 5,356               | 3.0%                          |
| 12   | D, D  | 3,915               | 2.4%                          |
| 13   | W, W  | 6,501               | 2.9%                          |
| 14   | D, D  | 2,767               | 1.5%                          |
| 15   | C, C  | 3,204               | 1.6%                          |
| 16   | D, C  | 4,609               | 1.9%                          |
| 17   | C, C  | 2,990               | 1.4%                          |
| 18   | C, C  | 4,466               | 1.8%                          |
| 19   | C, C  | 3,924               | 1.5%                          |
| 20   | AN, W   | 3,935               | 1.2%                          |
| 21   | C, C  | -790                | -0.3%                         |
| 22   | W, W  | 6,189               | 1.7%                          |
| 23   | W, W  | -6,068              | -1.7%                         |
| 24   | W, W  | 11,924              | 3.7%                          |
| 25   | W, W  | 7,818               | 2.7%                          |
| 26   | W, AN   | 1,995               | 0.8%                          |
| 27   | AN, AN  | 6,659               | 2.8%                          |
| 28   | D, D  | 8,365               | 3.6%                          |
| 29   | D, D  | 3,585               | 1.5%                          |
| 30   | AN, BN  | 5,961               | 2.6%                          |
| 31   | BN, D   | 2,718               | 1.3%                          |
| 32   | AN, W   | 7,962               | 3.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 7,851               | 2.4%                          |
| 34             | D, C  | -4,784              | -2.0%                         |
| 35             | C, C  | 6,792               | 3.1%                          |
| 36             | D, BN   | 7,255               | 3.0%                          |
| 37             | BN, AN  | 2,890               | 1.3%                          |
| 38             | W, W  | 6,990               | 2.3%                          |
| 39             | BN, D   | 1,865               | 0.8%                          |
| 40             | D, C  | 6,864               | 2.8%                          |
| 41             | C, C  | 6,483               | 2.8%                          |
| 42             | C, C  | 4,337               | 1.7%                          |
| <b>Average</b> |   | <b>4,531</b>        | <b>1.8%</b>                   |
| <b>Maximum</b> |   | <b>19,670</b>       | <b>7.9%</b>                   |
| <b>Minimum</b> |   | <b>-6,068</b>       | <b>-2.0%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-303. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 9 (SR9) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 18,100              | 5.6%                          |
| 2    | W, W  | 15,628              | 3.8%                          |
| 3    | C, C  | 47,348              | 10.1%                         |
| 4    | C, C  | 20,267              | 5.6%                          |
| 5    | AN, W   | -8,997              | -5.2%                         |
| 6    | BN, AN  | 42,798              | 12.4%                         |
| 7    | AN, W   | -743                | -0.3%                         |
| 8    | D, D  | 38,857              | 10.7%                         |
| 9    | W, W  | 69                  | 0.0%                          |
| 10   | W, W  | 48,727              | 13.2%                         |
| 11   | W, AN   | -425                | -0.1%                         |
| 12   | D, D  | 34,858              | 7.4%                          |
| 13   | W, W  | 15,215              | 4.0%                          |
| 14   | D, D  | 39,291              | 8.9%                          |
| 15   | C, C  | 26,369              | 6.7%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 22,355              | 7.0%                          |
| 17             | C, C  | 43,123              | 10.8%                         |
| 18             | C, C  | 33,927              | 10.0%                         |
| 19             | C, C  | 38,705              | 12.8%                         |
| 20             | AN, W   | -35,696             | -17.3%                        |
| 21             | C, C  | 31,413              | 8.4%                          |
| 22             | W, W  | 3,059               | 1.5%                          |
| 23             | W, W  | 4,738               | 1.6%                          |
| 24             | W, W  | 20,328              | 5.4%                          |
| 25             | W, W  | 41,262              | 12.5%                         |
| 26             | W, AN   | 4,462               | 1.0%                          |
| 27             | AN, AN  | 17,884              | 4.2%                          |
| 28             | D, D  | 46,422              | 9.7%                          |
| 29             | D, D  | 15,353              | 4.0%                          |
| 30             | AN, BN  | -5,931              | -1.8%                         |
| 31             | BN, D   | 19,134              | 5.3%                          |
| 32             | AN, W   | 35,406              | 8.9%                          |
| 33             | W, W  | 34,032              | 9.7%                          |
| 34             | D, C  | 15,676              | 3.4%                          |
| 35             | C, C  | 51,032              | 11.7%                         |
| 36             | D, BN   | 29,134              | 7.6%                          |
| 37             | BN, AN  | 3,801               | 1.1%                          |
| 38             | W, W  | 28,968              | 9.8%                          |
| 39             | BN, D   | 7,196               | 1.8%                          |
| 40             | D, C  | 40,589              | 10.7%                         |
| 41             | C, C  | 42,158              | 10.1%                         |
| 42             | C, C  | 35,840              | 10.6%                         |
| <b>Average</b> |   | <b>22,898</b>       | <b>5.8%</b>                   |
| <b>Maximum</b> |   | <b>51,032</b>       | <b>13.2%</b>                  |
| <b>Minimum</b> |   | <b>-35,696</b>      | <b>-17.3%</b>                 |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-304. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 10 (SR10) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 55,917              | 64.3%                         |
| 2    | W, W  | 54,480              | 60.5%                         |
| 3    | C, C  | 53,446              | 59.3%                         |
| 4    | C, C  | 108,859             | 485.1%                        |
| 5    | AN, W   | 87,570              | 520.1%                        |
| 6    | BN, AN  | 59,373              | 87.8%                         |
| 7    | AN, W   | 58,464              | 135.0%                        |
| 8    | D, D  | 79,615              | 95.5%                         |
| 9    | W, W  | 86,371              | 122.5%                        |
| 10   | W, W  | 72,257              | 85.8%                         |
| 11   | W, AN   | 56,843              | 48.0%                         |
| 12   | D, D  | 53,204              | 43.9%                         |
| 13   | W, W  | 61,667              | 75.0%                         |
| 14   | D, D  | 52,637              | 46.2%                         |
| 15   | C, C  | 105,122             | 102.6%                        |
| 16   | D, C  | 130,313             | 169.8%                        |
| 17   | C, C  | 88,675              | 148.3%                        |
| 18   | C, C  | 78,241              | 1422.6%                       |
| 19   | C, C  | 69,411              | 583.7%                        |
| 20   | AN, W   | 53,341              | 273.5%                        |
| 21   | C, C  | 48,109              | 148.9%                        |
| 22   | W, W  | 53,085              | 888.0%                        |
| 23   | W, W  | 61,144              | 110.6%                        |
| 24   | W, W  | 60,334              | 84.0%                         |
| 25   | W, W  | 60,271              | 79.7%                         |
| 26   | W, AN   | 49,114              | 38.5%                         |
| 27   | AN, AN  | 53,901              | 52.2%                         |
| 28   | D, D  | 52,090              | 47.8%                         |
| 29   | D, D  | 89,613              | 90.5%                         |
| 30   | AN, BN  | 93,438              | 100.6%                        |
| 31   | BN, D   | 63,377              | 64.2%                         |
| 32   | AN, W   | 62,390              | 60.7%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 60,624              | 52.0%                         |
| 34             | D, C  | 55,763              | 46.6%                         |
| 35             | C, C  | 112,827             | 129.2%                        |
| 36             | D, BN   | 115,024             | 137.3%                        |
| 37             | BN, AN  | 65,677              | 90.8%                         |
| 38             | W, W  | 72,708              | 64.7%                         |
| 39             | BN, D   | 61,236              | 43.6%                         |
| 40             | D, C  | 58,463              | 50.8%                         |
| 41             | C, C  | 58,230              | 122.5%                        |
| 42             | C, C  | 68,104              | 811.3%                        |
| <b>Average</b> |   | <b>70,032</b>       | <b>189.1%</b>                 |
| <b>Maximum</b> |   | <b>130,313</b>      | <b>1422.6%</b>                |
| <b>Minimum</b> |   | <b>48,109</b>       | <b>38.5%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-305. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 11 (SR11) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 16,681              | 40.2%                         |
| 2    | W, W  | 15,841              | 34.0%                         |
| 3    | C, C  | 22,404              | 112.6%                        |
| 4    | C, C  | 28,675              | 30.1%                         |
| 5    | AN, W   | 24,390              | 33.9%                         |
| 6    | BN, AN  | 17,218              | 54.8%                         |
| 7    | AN, W   | 17,683              | 235.7%                        |
| 8    | D, D  | 14,618              | 74.1%                         |
| 9    | W, W  | 17,776              | 90.9%                         |
| 10   | W, W  | 13,044              | 41.2%                         |
| 11   | W, AN   | 28,647              | 29.4%                         |
| 12   | D, D  | 17,289              | 24.1%                         |
| 13   | W, W  | 20,775              | 39.2%                         |
| 14   | D, D  | 26,742              | 68.2%                         |
| 15   | C, C  | 33,563              | 155.3%                        |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 26,508              | 46.1%                         |
| 17             | C, C  | 23,803              | 36.2%                         |
| 18             | C, C  | 22,233              | 27.3%                         |
| 19             | C, C  | 18,522              | 23.5%                         |
| 20             | AN, W   | 22,676              | 52.4%                         |
| 21             | C, C  | 17,373              | 37.7%                         |
| 22             | W, W  | 16,646              | 42.7%                         |
| 23             | W, W  | 15,199              | 146.8%                        |
| 24             | W, W  | 13,197              | 62.8%                         |
| 25             | W, W  | 16,371              | 36.6%                         |
| 26             | W, AN   | 19,329              | 18.5%                         |
| 27             | AN, AN  | 13,714              | 27.2%                         |
| 28             | D, D  | 21,014              | 44.5%                         |
| 29             | D, D  | 25,743              | 72.6%                         |
| 30             | AN, BN  | 25,785              | 75.4%                         |
| 31             | BN, D   | 28,849              | 78.9%                         |
| 32             | AN, W   | 24,664              | 48.8%                         |
| 33             | W, W  | 21,552              | 32.8%                         |
| 34             | D, C  | 25,945              | 36.3%                         |
| 35             | C, C  | 25,761              | 551.5%                        |
| 36             | D, BN   | 29,493              | 161.9%                        |
| 37             | BN, AN  | 23,285              | 316.2%                        |
| 38             | W, W  | 19,119              | 4197.3%                       |
| 39             | BN, D   | 27,052              | 32.2%                         |
| 40             | D, C  | 23,202              | 172.3%                        |
| 41             | C, C  | 27,292              | 44.2%                         |
| 42             | C, C  | 30,637              | 33.7%                         |
| <b>Average</b> |   | <b>21,912</b>       | <b>179.1%</b>                 |
| <b>Maximum</b> |   | <b>33,563</b>       | <b>4197.3%</b>                |
| <b>Minimum</b> |   | <b>13,044</b>       | <b>18.5%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-306. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 12 (SR12) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 17,224              | 19.9%                         |
| 2    | W, W  | 17,724              | 22.8%                         |
| 3    | C, C  | 18,899              | 18.3%                         |
| 4    | C, C  | 18,141              | 10.5%                         |
| 5    | AN, W   | 15,512              | 8.3%                          |
| 6    | BN, AN  | 15,001              | 8.8%                          |
| 7    | AN, W   | 15,010              | 11.0%                         |
| 8    | D, D  | 16,251              | 13.9%                         |
| 9    | W, W  | 17,230              | 18.0%                         |
| 10   | W, W  | 16,562              | 21.2%                         |
| 11   | W, AN   | 16,507              | 26.7%                         |
| 12   | D, D  | 17,546              | 23.7%                         |
| 13   | W, W  | 18,186              | 22.8%                         |
| 14   | D, D  | 18,553              | 19.7%                         |
| 15   | C, C  | 20,785              | 14.6%                         |
| 16   | D, C  | 17,876              | 8.9%                          |
| 17   | C, C  | 16,866              | 7.9%                          |
| 18   | C, C  | 14,973              | 6.4%                          |
| 19   | C, C  | 12,463              | 5.3%                          |
| 20   | AN, W   | 13,980              | 6.9%                          |
| 21   | C, C  | 14,993              | 7.5%                          |
| 22   | W, W  | 15,819              | 9.0%                          |
| 23   | W, W  | 16,660              | 13.8%                         |
| 24   | W, W  | 17,855              | 15.4%                         |
| 25   | W, W  | 17,689              | 21.8%                         |
| 26   | W, AN   | 17,172              | 33.0%                         |
| 27   | AN, AN  | 19,055              | 22.9%                         |
| 28   | D, D  | 20,158              | 23.3%                         |
| 29   | D, D  | 21,374              | 21.4%                         |
| 30   | AN, BN  | 23,191              | 24.1%                         |
| 31   | BN, D   | 25,543              | 26.4%                         |
| 32   | AN, W   | 22,620              | 32.1%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 21,348              | 37.1%                         |
| 34             | D, C  | 20,476              | 28.8%                         |
| 35             | C, C  | 21,595              | 16.5%                         |
| 36             | D, BN   | 23,207              | 15.4%                         |
| 37             | BN, AN  | 21,269              | 19.4%                         |
| 38             | W, W  | 21,112              | 21.2%                         |
| 39             | BN, D   | 20,366              | 34.6%                         |
| 40             | D, C  | 20,064              | 16.6%                         |
| 41             | C, C  | 18,166              | 9.3%                          |
| 42             | C, C  | 16,365              | 7.5%                          |
| <b>Average</b> |   | <b>18,366</b>       | <b>17.9%</b>                  |
| <b>Maximum</b> |   | <b>25,543</b>       | <b>37.1%</b>                  |
| <b>Minimum</b> |   | <b>12,463</b>       | <b>5.3%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-307. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 13 (SR13) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 42,279              | 7.4%                          |
| 2    | W, W  | 41,979              | 6.9%                          |
| 3    | C, C  | 38,457              | 6.2%                          |
| 4    | C, C  | 70,451              | 11.1%                         |
| 5    | AN, W   | 64,638              | 7.4%                          |
| 6    | BN, AN  | 53,808              | 7.8%                          |
| 7    | AN, W   | 43,470              | 6.1%                          |
| 8    | D, D  | 61,199              | 9.6%                          |
| 9    | W, W  | 58,887              | 8.8%                          |
| 10   | W, W  | 48,595              | 5.8%                          |
| 11   | W, AN   | 46,986              | 7.7%                          |
| 12   | D, D  | 46,968              | 8.1%                          |
| 13   | W, W  | 47,927              | 7.2%                          |
| 14   | D, D  | 48,436              | 8.2%                          |
| 15   | C, C  | 77,989              | 13.7%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 95,601              | 15.4%                         |
| 17             | C, C  | 69,703              | 11.3%                         |
| 18             | C, C  | 62,598              | 8.9%                          |
| 19             | C, C  | 60,794              | 8.4%                          |
| 20             | AN, W   | 53,157              | 7.4%                          |
| 21             | C, C  | 50,268              | 7.1%                          |
| 22             | W, W  | 51,584              | 6.7%                          |
| 23             | W, W  | 52,138              | 7.3%                          |
| 24             | W, W  | 50,971              | 6.1%                          |
| 25             | W, W  | 51,871              | 7.1%                          |
| 26             | W, AN   | 51,556              | 9.1%                          |
| 27             | AN, AN  | 52,813              | 8.1%                          |
| 28             | D, D  | 52,345              | 8.5%                          |
| 29             | D, D  | 75,983              | 12.4%                         |
| 30             | AN, BN  | 78,763              | 13.2%                         |
| 31             | BN, D   | 59,803              | 10.0%                         |
| 32             | AN, W   | 57,058              | 9.2%                          |
| 33             | W, W  | 56,315              | 8.7%                          |
| 34             | D, C  | 57,071              | 9.4%                          |
| 35             | C, C  | 89,538              | 14.4%                         |
| 36             | D, BN   | 90,090              | 14.8%                         |
| 37             | BN, AN  | 63,977              | 10.7%                         |
| 38             | W, W  | 62,758              | 8.6%                          |
| 39             | BN, D   | 61,816              | 9.6%                          |
| 40             | D, C  | 59,199              | 9.1%                          |
| 41             | C, C  | 53,794              | 7.8%                          |
| 42             | C, C  | 46,335              | 6.6%                          |
| <b>Average</b> |   | <b>58,571</b>       | <b>9.0%</b>                   |
| <b>Maximum</b> |   | <b>95,601</b>       | <b>15.4%</b>                  |
| <b>Minimum</b> |   | <b>38,457</b>       | <b>5.8%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-308. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 14 (SR14) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -2,215              | -4.1%                         |
| 2    | W, W  | -2,132              | -4.1%                         |
| 3    | C, C  | -936                | -2.1%                         |
| 4    | C, C  | -1,972              | -4.4%                         |
| 5    | AN, W   | -1,635              | -1.5%                         |
| 6    | BN, AN  | -1,042              | -2.0%                         |
| 7    | AN, W   | -2,171              | -2.8%                         |
| 8    | D, D  | -786                | -1.6%                         |
| 9    | W, W  | -2,055              | -3.1%                         |
| 10   | W, W  | -2,233              | -1.6%                         |
| 11   | W, AN   | -4,333              | -7.5%                         |
| 12   | D, D  | -1,156              | -2.4%                         |
| 13   | W, W  | -2,657              | -3.3%                         |
| 14   | D, D  | -1,382              | -3.0%                         |
| 15   | C, C  | -730                | -1.7%                         |
| 16   | D, C  | -519                | -1.2%                         |
| 17   | C, C  | -1,460              | -3.6%                         |
| 18   | C, C  | -2,098              | -3.9%                         |
| 19   | C, C  | -2,162              | -4.3%                         |
| 20   | AN, W   | -1,549              | -1.7%                         |
| 21   | C, C  | -1,917              | -4.2%                         |
| 22   | W, W  | -1,277              | -1.2%                         |
| 23   | W, W  | -1,248              | -1.9%                         |
| 24   | W, W  | -940                | -1.2%                         |
| 25   | W, W  | 82                  | 0.1%                          |
| 26   | W, AN   | -165                | -0.4%                         |
| 27   | AN, AN  | -1,091              | -2.1%                         |
| 28   | D, D  | -1,212              | -2.4%                         |
| 29   | D, D  | -1,882              | -4.2%                         |
| 30   | AN, BN  | -1,772              | -3.9%                         |
| 31   | BN, D   | -1,928              | -4.1%                         |
| 32   | AN, W   | -1,057              | -1.6%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -681                | -1.3%                         |
| 34             | D, C  | -1,567              | -3.3%                         |
| 35             | C, C  | -1,819              | -3.6%                         |
| 36             | D, BN   | -2,104              | -4.7%                         |
| 37             | BN, AN  | -1,788              | -3.3%                         |
| 38             | W, W  | -629                | -0.9%                         |
| 39             | BN, D   | -1,229              | -2.7%                         |
| 40             | D, C  | -2,000              | -4.3%                         |
| 41             | C, C  | -1,904              | -4.4%                         |
| 42             | C, C  | -1,652              | -3.8%                         |
| <b>Average</b> |   | <b>-1,548</b>       | <b>-2.8%</b>                  |
| <b>Maximum</b> |   | <b>82</b>           | <b>0.1%</b>                   |
| <b>Minimum</b> |   | <b>-4,333</b>       | <b>-7.5%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-309. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 15 (SR15) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 73,013              | 14.6%                         |
| 2    | W, W  | 75,409              | 19.1%                         |
| 3    | C, C  | 73,783              | 16.5%                         |
| 4    | C, C  | 72,510              | 15.9%                         |
| 5    | AN, W   | 84,175              | 8.2%                          |
| 6    | BN, AN  | 74,971              | 15.8%                         |
| 7    | AN, W   | 125,160             | 15.3%                         |
| 8    | D, D  | 81,108              | 20.4%                         |
| 9    | W, W  | 129,738             | 19.4%                         |
| 10   | W, W  | 147,569             | 27.0%                         |
| 11   | W, AN   | 113,169             | 29.1%                         |
| 12   | D, D  | 85,840              | 20.9%                         |
| 13   | W, W  | 135,955             | 23.9%                         |
| 14   | D, D  | 102,612             | 25.4%                         |
| 15   | C, C  | 88,264              | 24.5%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 93,591              | 23.2%                         |
| 17             | C, C  | 85,073              | 19.7%                         |
| 18             | C, C  | 83,274              | 17.4%                         |
| 19             | C, C  | 78,225              | 16.5%                         |
| 20             | AN, W   | 73,514              | 14.8%                         |
| 21             | C, C  | 72,003              | 13.9%                         |
| 22             | W, W  | 129,152             | 13.5%                         |
| 23             | W, W  | 117,908             | 17.2%                         |
| 24             | W, W  | 141,378             | 23.2%                         |
| 25             | W, W  | 130,437             | 25.1%                         |
| 26             | W, AN   | 95,995              | 27.2%                         |
| 27             | AN, AN  | 94,290              | 22.1%                         |
| 28             | D, D  | 87,998              | 21.1%                         |
| 29             | D, D  | 88,812              | 23.5%                         |
| 30             | AN, BN  | 91,308              | 22.6%                         |
| 31             | BN, D   | 89,911              | 22.4%                         |
| 32             | AN, W   | 97,075              | 15.5%                         |
| 33             | W, W  | 181,795             | 27.4%                         |
| 34             | D, C  | 98,548              | 23.4%                         |
| 35             | C, C  | 93,334              | 23.5%                         |
| 36             | D, BN   | 89,955              | 20.7%                         |
| 37             | BN, AN  | 105,596             | 13.9%                         |
| 38             | W, W  | 182,826             | 23.5%                         |
| 39             | BN, D   | 107,592             | 21.6%                         |
| 40             | D, C  | 92,143              | 22.5%                         |
| 41             | C, C  | 79,394              | 16.4%                         |
| 42             | C, C  | 77,169              | 16.1%                         |
| <b>Average</b> |   | <b>100,514</b>      | <b>20.1%</b>                  |
| <b>Maximum</b> |   | <b>182,826</b>      | <b>29.1%</b>                  |
| <b>Minimum</b> |   | <b>72,003</b>       | <b>8.2%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-310. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 16 (SR16) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 3,784               | 11.3%                         |
| 2    | W, W  | 4,051               | 14.0%                         |
| 3    | C, C  | 4,015               | 8.0%                          |
| 4    | C, C  | 3,643               | 4.8%                          |
| 5    | AN, W   | 4,343               | 6.4%                          |
| 6    | BN, AN  | 4,398               | 10.5%                         |
| 7    | AN, W   | 4,332               | 11.4%                         |
| 8    | D, D  | 4,784               | 11.7%                         |
| 9    | W, W  | 4,781               | 13.1%                         |
| 10   | W, W  | 5,198               | 17.0%                         |
| 11   | W, AN   | 5,556               | 33.5%                         |
| 12   | D, D  | 5,609               | 20.9%                         |
| 13   | W, W  | 6,886               | 25.8%                         |
| 14   | D, D  | 6,810               | 25.1%                         |
| 15   | C, C  | 6,409               | 15.3%                         |
| 16   | D, C  | 7,444               | 13.6%                         |
| 17   | C, C  | 6,781               | 10.6%                         |
| 18   | C, C  | 7,129               | 9.8%                          |
| 19   | C, C  | 6,742               | 9.2%                          |
| 20   | AN, W   | 6,920               | 12.0%                         |
| 21   | C, C  | 6,882               | 12.1%                         |
| 22   | W, W  | 7,780               | 15.8%                         |
| 23   | W, W  | 7,530               | 17.8%                         |
| 24   | W, W  | 7,363               | 21.0%                         |
| 25   | W, W  | 8,083               | 25.5%                         |
| 26   | W, AN   | 8,180               | 33.2%                         |
| 27   | AN, AN  | 8,139               | 29.5%                         |
| 28   | D, D  | 8,454               | 20.3%                         |
| 29   | D, D  | 9,222               | 17.8%                         |
| 30   | AN, BN  | 8,959               | 15.7%                         |
| 31   | BN, D   | 9,048               | 16.6%                         |
| 32   | AN, W   | 8,546               | 20.7%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 8,993               | 31.9%                         |
| 34             | D, C  | 9,085               | 19.2%                         |
| 35             | C, C  | 8,888               | 14.8%                         |
| 36             | D, BN   | 8,931               | 14.4%                         |
| 37             | BN, AN  | 9,093               | 16.2%                         |
| 38             | W, W  | 8,944               | 26.9%                         |
| 39             | BN, D   | 9,236               | 19.5%                         |
| 40             | D, C  | 8,753               | 11.2%                         |
| 41             | C, C  | 9,161               | 9.6%                          |
| 42             | C, C  | 3,459               | 3.7%                          |
| <b>Average</b> |   | <b>6,961</b>        | <b>16.6%</b>                  |
| <b>Maximum</b> |   | <b>9,236</b>        | <b>33.5%</b>                  |
| <b>Minimum</b> |   | <b>3,459</b>        | <b>3.7%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-311. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 17 (SR17) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 4,354               | 21.4%                         |
| 2    | W, W  | 4,135               | 8.8%                          |
| 3    | C, C  | 3,837               | 3.5%                          |
| 4    | C, C  | 543                 | 0.5%                          |
| 5    | AN, W   | 5,470               | 5.2%                          |
| 6    | BN, AN  | 5,108               | 68.6%                         |
| 7    | AN, W   | 5,387               | 15.7%                         |
| 8    | D, D  | 5,043               | 43.3%                         |
| 9    | W, W  | 5,015               | 19.5%                         |
| 10   | W, W  | 6,778               | 13.9%                         |
| 11   | W, AN   | 6,784               | 6.8%                          |
| 12   | D, D  | 6,778               | 84.7%                         |
| 13   | W, W  | 7,508               | 55.4%                         |
| 14   | D, D  | 7,603               | 118.0%                        |
| 15   | C, C  | 4,301               | 7.9%                          |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 1,004               | 1.7%                          |
| 17             | C, C  | 285                 | 0.4%                          |
| 18             | C, C  | 536                 | 0.6%                          |
| 19             | C, C  | 149                 | 0.2%                          |
| 20             | AN, W   | 6,595               | 5.5%                          |
| 21             | C, C  | 6,605               | 5.0%                          |
| 22             | W, W  | 7,914               | 11.2%                         |
| 23             | W, W  | 9,556               | 27.3%                         |
| 24             | W, W  | 9,182               | 60.9%                         |
| 25             | W, W  | 8,722               | 383.0%                        |
| 26             | W, AN   | 8,787               | 46.6%                         |
| 27             | AN, AN  | 8,714               | 50.2%                         |
| 28             | D, D  | 8,118               | 14.2%                         |
| 29             | D, D  | 5,411               | 7.8%                          |
| 30             | AN, BN  | 6,734               | 8.3%                          |
| 31             | BN, D   | 5,114               | 5.4%                          |
| 32             | AN, W   | 11,493              | 15.6%                         |
| 33             | W, W  | 13,903              | 47.1%                         |
| 34             | D, C  | 12,672              | 19.7%                         |
| 35             | C, C  | 6,910               | 8.2%                          |
| 36             | D, BN   | 5,773               | 6.3%                          |
| 37             | BN, AN  | 11,768              | 8.7%                          |
| 38             | W, W  | 16,041              | 21.9%                         |
| 39             | BN, D   | 11,535              | 22.4%                         |
| 40             | D, C  | 5,378               | 4.5%                          |
| 41             | C, C  | 4,700               | 3.5%                          |
| 42             | C, C  | 112                 | 0.2%                          |
| <b>Average</b> |   | <b>6,485</b>        | <b>30.0%</b>                  |
| <b>Maximum</b> |   | <b>16,041</b>       | <b>383.0%</b>                 |
| <b>Minimum</b> |   | <b>112</b>          | <b>0.2%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-312. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 18 (SR18) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 29,792              | 53.2%                         |
| 2    | W, W  | 24,440              | 34.1%                         |
| 3    | C, C  | 17,464              | 53.4%                         |
| 4    | C, C  | 9,258               | 22.4%                         |
| 5    | AN, W   | 16,754              | 12.9%                         |
| 6    | BN, AN  | 62,162              | 30.1%                         |
| 7    | AN, W   | 51,428              | 21.5%                         |
| 8    | D, D  | 52,882              | 18.3%                         |
| 9    | W, W  | 63,443              | 21.2%                         |
| 10   | W, W  | 83,029              | 7.8%                          |
| 11   | W, AN   | 84,961              | 7.2%                          |
| 12   | D, D  | 76,332              | 10.9%                         |
| 13   | W, W  | 87,312              | 11.3%                         |
| 14   | D, D  | 82,397              | 11.8%                         |
| 15   | C, C  | 74,152              | 19.5%                         |
| 16   | D, C  | 72,791              | 45.6%                         |
| 17   | C, C  | 44,071              | 746.3%                        |
| 18   | C, C  | 28,690              | 53.1%                         |
| 19   | C, C  | 18,204              | 24.7%                         |
| 20   | AN, W   | 18,905              | 18.0%                         |
| 21   | C, C  | 18,673              | 216.9%                        |
| 22   | W, W  | 51,139              | 171.2%                        |
| 23   | W, W  | 93,419              | 31.0%                         |
| 24   | W, W  | 108,115             | 48.2%                         |
| 25   | W, W  | 111,107             | 22.1%                         |
| 26   | W, AN   | 91,215              | 11.4%                         |
| 27   | AN, AN  | 86,176              | 15.4%                         |
| 28   | D, D  | 90,322              | 20.5%                         |
| 29   | D, D  | 82,514              | 39.2%                         |
| 30   | AN, BN  | 81,207              | 109.3%                        |
| 31   | BN, D   | 50,957              | 143.2%                        |
| 32   | AN, W   | 83,084              | 119.9%                        |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 107,733             | 57.9%                         |
| 34             | D, C  | 87,792              | 55.4%                         |
| 35             | C, C  | 32,730              | 64.9%                         |
| 36             | D, BN   | 25,197              | 32.6%                         |
| 37             | BN, AN  | 27,810              | 33.2%                         |
| 38             | W, W  | 129,367             | 55.3%                         |
| 39             | BN, D   | 116,006             | 43.7%                         |
| 40             | D, C  | 57,582              | 165.5%                        |
| 41             | C, C  | 15,874              | 25.5%                         |
| 42             | C, C  | 12,719              | 13.3%                         |
| <b>Average</b> |   | <b>60,933</b>       | <b>64.7%</b>                  |
| <b>Maximum</b> |   | <b>129,367</b>      | <b>746.3%</b>                 |
| <b>Minimum</b> |   | <b>9,258</b>        | <b>7.2%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-313. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 19 (SR19) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 1                   | 0.0%                          |
| 2    | W, W  | 0                   | 0.0%                          |
| 3    | C, C  | 0                   | 0.0%                          |
| 4    | C, C  | 0                   | 0.0%                          |
| 5    | AN, W   | 2                   | 0.0%                          |
| 6    | BN, AN  | 1                   | 0.0%                          |
| 7    | AN, W   | 2                   | 0.0%                          |
| 8    | D, D  | 1                   | 0.0%                          |
| 9    | W, W  | 1                   | 0.0%                          |
| 10   | W, W  | 5                   | 0.0%                          |
| 11   | W, AN   | 2                   | 0.0%                          |
| 12   | D, D  | 0                   | 0.0%                          |
| 13   | W, W  | 0                   | 0.0%                          |
| 14   | D, D  | 0                   | 0.0%                          |
| 15   | C, C  | 2                   | 0.2%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 0                   | 0.0%                          |
| 17             | C, C  | 0                   | 0.0%                          |
| 18             | C, C  | 0                   | 0.0%                          |
| 19             | C, C  | 0                   | 0.0%                          |
| 20             | AN, W   | 0                   | 0.0%                          |
| 21             | C, C  | 0                   | 0.0%                          |
| 22             | W, W  | 6                   | 0.1%                          |
| 23             | W, W  | 5                   | 0.8%                          |
| 24             | W, W  | 7                   | 0.2%                          |
| 25             | W, W  | 2                   | 0.0%                          |
| 26             | W, AN   | 4                   | 0.0%                          |
| 27             | AN, AN  | 3                   | 1.6%                          |
| 28             | D, D  | 2                   | 0.2%                          |
| 29             | D, D  | -1                  | -0.1%                         |
| 30             | AN, BN  | 0                   | 0.0%                          |
| 31             | BN, D   | 0                   | 0.0%                          |
| 32             | AN, W   | 7                   | 0.3%                          |
| 33             | W, W  | 11                  | 0.2%                          |
| 34             | D, C  | 7                   | 0.1%                          |
| 35             | C, C  | 1                   | 0.1%                          |
| 36             | D, BN   | 0                   | 0.0%                          |
| 37             | BN, AN  | 0                   | 0.0%                          |
| 38             | W, W  | 10                  | 0.4%                          |
| 39             | BN, D   | 6                   | 1.1%                          |
| 40             | D, C  | 0                   | 0.0%                          |
| 41             | C, C  | 0                   | 0.0%                          |
| 42             | C, C  | 0                   | 0.0%                          |
| <b>Average</b> |   | <b>2</b>            | <b>0.1%</b>                   |
| <b>Maximum</b> |   | <b>11</b>           | <b>1.6%</b>                   |
| <b>Minimum</b> |   | <b>-1</b>           | <b>-0.1%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-314. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 20 (SR20) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 1                   | 0.0%                          |
| 2    | W, W  | 1                   | 0.0%                          |
| 3    | C, C  | 1                   | 0.0%                          |
| 4    | C, C  | 1                   | 0.0%                          |
| 5    | AN, W   | 1                   | 0.0%                          |
| 6    | BN, AN  | 1                   | 0.0%                          |
| 7    | AN, W   | 1                   | 0.0%                          |
| 8    | D, D  | 2                   | 0.0%                          |
| 9    | W, W  | 2                   | 0.0%                          |
| 10   | W, W  | 2                   | 0.0%                          |
| 11   | W, AN   | 2                   | 0.0%                          |
| 12   | D, D  | 2                   | 0.0%                          |
| 13   | W, W  | 2                   | 0.0%                          |
| 14   | D, D  | 3                   | 0.0%                          |
| 15   | C, C  | 3                   | 0.0%                          |
| 16   | D, C  | 3                   | 0.0%                          |
| 17   | C, C  | 3                   | 0.0%                          |
| 18   | C, C  | 3                   | 0.0%                          |
| 19   | C, C  | 3                   | 0.0%                          |
| 20   | AN, W   | 3                   | 0.0%                          |
| 21   | C, C  | 3                   | 0.0%                          |
| 22   | W, W  | 3                   | 0.0%                          |
| 23   | W, W  | 3                   | 0.0%                          |
| 24   | W, W  | 5                   | 0.0%                          |
| 25   | W, W  | 5                   | 0.0%                          |
| 26   | W, AN   | 5                   | 0.0%                          |
| 27   | AN, AN  | 6                   | 0.0%                          |
| 28   | D, D  | 6                   | 0.0%                          |
| 29   | D, D  | 7                   | 0.0%                          |
| 30   | AN, BN  | 7                   | 0.0%                          |
| 31   | BN, D   | 7                   | 0.0%                          |
| 32   | AN, W   | 7                   | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | 7                   | 0.0%                          |
| 34             | D, C  | 8                   | 0.0%                          |
| 35             | C, C  | 8                   | 0.0%                          |
| 36             | D, BN   | 8                   | 0.0%                          |
| 37             | BN, AN  | 8                   | 0.0%                          |
| 38             | W, W  | 10                  | 0.0%                          |
| 39             | BN, D   | 9                   | 0.0%                          |
| 40             | D, C  | 9                   | 0.0%                          |
| 41             | C, C  | 9                   | 0.0%                          |
| 42             | C, C  | 9                   | 0.0%                          |
| <b>Average</b> |   | <b>4</b>            | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>10</b>           | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>1</b>            | <b>0.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-315. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 21 (SR21) for Alternative 3 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 0                   | 0.0%                          |
| 2    | W, W  | -1                  | 0.0%                          |
| 3    | C, C  | 0                   | 0.0%                          |
| 4    | C, C  | 0                   | 0.0%                          |
| 5    | AN, W   | 0                   | 0.0%                          |
| 6    | BN, AN  | 0                   | 0.0%                          |
| 7    | AN, W   | 2                   | 0.0%                          |
| 8    | D, D  | 1                   | 0.0%                          |
| 9    | W, W  | 1                   | 0.0%                          |
| 10   | W, W  | 23                  | 0.0%                          |
| 11   | W, AN   | 10                  | 0.0%                          |
| 12   | D, D  | 1                   | 0.0%                          |
| 13   | W, W  | 9                   | 0.0%                          |
| 14   | D, D  | 1                   | 0.0%                          |
| 15   | C, C  | 0                   | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt3 minus NAA (AF) | Alt3 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -1                  | 0.0%                          |
| 17             | C, C  | 0                   | 0.0%                          |
| 18             | C, C  | -1                  | 0.0%                          |
| 19             | C, C  | -1                  | 0.0%                          |
| 20             | AN, W   | -1                  | 0.0%                          |
| 21             | C, C  | -2                  | 0.0%                          |
| 22             | W, W  | 1                   | 0.0%                          |
| 23             | W, W  | 8                   | 0.0%                          |
| 24             | W, W  | 9                   | 0.0%                          |
| 25             | W, W  | 33                  | 0.0%                          |
| 26             | W, AN   | 25                  | 0.0%                          |
| 27             | AN, AN  | 7                   | 0.0%                          |
| 28             | D, D  | 2                   | 0.0%                          |
| 29             | D, D  | -1                  | 0.0%                          |
| 30             | AN, BN  | -3                  | 0.0%                          |
| 31             | BN, D   | -3                  | 0.0%                          |
| 32             | AN, W   | 6                   | 0.0%                          |
| 33             | W, W  | 35                  | 0.0%                          |
| 34             | D, C  | 11                  | 0.0%                          |
| 35             | C, C  | 0                   | 0.0%                          |
| 36             | D, BN   | -2                  | 0.0%                          |
| 37             | BN, AN  | -1                  | 0.0%                          |
| 38             | W, W  | 6                   | 0.0%                          |
| 39             | BN, D   | 8                   | 0.0%                          |
| 40             | D, C  | -2                  | 0.0%                          |
| 41             | C, C  | 0                   | 0.0%                          |
| 42             | C, C  | 0                   | 0.0%                          |
| <b>Average</b> |   | <b>4</b>            | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>35</b>           | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-3</b>           | <b>0.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

**I-1.2.8 Changes in Groundwater-Surface Water Interaction Flow, Alternative 4 Compared to No Action Alternative**

Table I.1-316 through Table I.1-336 provide the annual simulated groundwater-surface water interaction flow through the model simulation period for each of the 21 model subregions for Alternative 4 compared to the No Action Alternative.

Table I.1-316. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 1 (SR1) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -670                | -0.2%                         |
| 2    | W, W  | 1,552               | 0.5%                          |
| 3    | C, C  | -823                | -0.3%                         |
| 4    | C, C  | 6,000               | 2.3%                          |
| 5    | AN, W   | 4,046               | 1.8%                          |
| 6    | BN, AN  | 5,115               | 2.0%                          |
| 7    | AN, W   | -2,094              | -0.8%                         |
| 8    | D, D  | 275                 | 0.1%                          |
| 9    | W, W  | 226                 | 0.1%                          |
| 10   | W, W  | -1,246              | -0.4%                         |
| 11   | W, AN   | -1,351              | -0.4%                         |
| 12   | D, D  | 355                 | 0.1%                          |
| 13   | W, W  | 786                 | 0.3%                          |
| 14   | D, D  | -1,611              | -0.6%                         |
| 15   | C, C  | -1,281              | -0.5%                         |
| 16   | D, C  | 2,287               | 0.9%                          |
| 17   | C, C  | 632                 | 0.3%                          |
| 18   | C, C  | 5,064               | 2.5%                          |
| 19   | C, C  | 9,004               | 4.7%                          |
| 20   | AN, W   | -139                | -0.1%                         |
| 21   | C, C  | 214                 | 0.1%                          |
| 22   | W, W  | 821                 | 0.4%                          |
| 23   | W, W  | -1,476              | -0.6%                         |
| 24   | W, W  | 731                 | 0.3%                          |
| 25   | W, W  | 544                 | 0.2%                          |
| 26   | W, AN   | -2,308              | -0.7%                         |
| 27   | AN, AN  | 2,574               | 0.9%                          |
| 28   | D, D  | 121                 | 0.0%                          |
| 29   | D, D  | 827                 | 0.3%                          |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 30             | AN, BN  | -2,013              | -0.7%                         |
| 31             | BN, D   | -1,442              | -0.5%                         |
| 32             | AN, W   | 1,716               | 0.6%                          |
| 33             | W, W  | 1,775               | 0.6%                          |
| 34             | D, C  | -2,508              | -0.8%                         |
| 35             | C, C  | 486                 | 0.2%                          |
| 36             | D, BN   | 1,135               | 0.4%                          |
| 37             | BN, AN  | 114                 | 0.0%                          |
| 38             | W, W  | -29                 | 0.0%                          |
| 39             | BN, D   | -476                | -0.2%                         |
| 40             | D, C  | 287                 | 0.1%                          |
| 41             | C, C  | 5,461               | 2.3%                          |
| 42             | C, C  | 13,948              | 6.6%                          |
| <b>Average</b> |   | <b>1,110</b>        | <b>0.5%</b>                   |
| <b>Maximum</b> |   | <b>13,948</b>       | <b>6.6%</b>                   |
| <b>Minimum</b> |   | <b>-2,508</b>       | <b>-0.8%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.

Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-317. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 2 (SR2) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -1,509              | -1.6%                         |
| 2    | W, W  | 1,915               | 4.1%                          |
| 3    | C, C  | -1,458              | -11.2%                        |
| 4    | C, C  | 46                  | 0.4%                          |
| 5    | AN, W   | 1,447               | 0.4%                          |
| 6    | BN, AN  | 8,476               | 6.2%                          |
| 7    | AN, W   | -8,480              | -4.7%                         |
| 8    | D, D  | -2,508              | -2.0%                         |
| 9    | W, W  | -338                | -0.2%                         |
| 10   | W, W  | -1,907              | -12.1%                        |
| 11   | W, AN   | -2,351              | -7.6%                         |
| 12   | D, D  | 13                  | 0.0%                          |
| 13   | W, W  | 1,058               | 1.6%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 14             | D, D  | -5,074              | -7.5%                         |
| 15             | C, C  | -2,928              | -2.1%                         |
| 16             | D, C  | 6,772               | 3.4%                          |
| 17             | C, C  | 704                 | 0.6%                          |
| 18             | C, C  | -1,603              | -1.0%                         |
| 19             | C, C  | 6,466               | 2.6%                          |
| 20             | AN, W   | -1,138              | -0.3%                         |
| 21             | C, C  | -1,557              | -1.7%                         |
| 22             | W, W  | -367                | -0.1%                         |
| 23             | W, W  | -3,803              | -2.5%                         |
| 24             | W, W  | 1,134               | 1.4%                          |
| 25             | W, W  | 984                 | 1.2%                          |
| 26             | W, AN   | -4,545              | -141.5%                       |
| 27             | AN, AN  | 3,825               | 8.1%                          |
| 28             | D, D  | -1,198              | -3.5%                         |
| 29             | D, D  | -545                | -0.5%                         |
| 30             | AN, BN  | -4,876              | -3.2%                         |
| 31             | BN, D   | -3,683              | -4.8%                         |
| 32             | AN, W   | 1,690               | 2.2%                          |
| 33             | W, W  | 2,129               | 5.8%                          |
| 34             | D, C  | -4,606              | -20.0%                        |
| 35             | C, C  | 954                 | 1.1%                          |
| 36             | D, BN   | 3,010               | 2.3%                          |
| 37             | BN, AN  | -1,064              | -0.6%                         |
| 38             | W, W  | 257                 | 0.2%                          |
| 39             | BN, D   | -939                | -1.5%                         |
| 40             | D, C  | 346                 | 0.3%                          |
| 41             | C, C  | -2,661              | -2.4%                         |
| 42             | C, C  | 4,166               | 1.9%                          |
| <b>Average</b> |   | <b>-327</b>         | <b>-4.5%</b>                  |
| <b>Maximum</b> |   | <b>8,476</b>        | <b>8.1%</b>                   |
| <b>Minimum</b> |   | <b>-8,480</b>       | <b>-141.5%</b>                |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-318. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 3 (SR3) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -355                | -0.4%                         |
| 2    | W, W  | -443                | -0.5%                         |
| 3    | C, C  | -248                | -0.3%                         |
| 4    | C, C  | 5,695               | 8.7%                          |
| 5    | AN, W   | 7,005               | 14.3%                         |
| 6    | BN, AN  | 2,170               | 3.1%                          |
| 7    | AN, W   | -1,585              | -2.2%                         |
| 8    | D, D  | -565                | -0.7%                         |
| 9    | W, W  | -933                | -1.1%                         |
| 10   | W, W  | -473                | -0.5%                         |
| 11   | W, AN   | -448                | -0.4%                         |
| 12   | D, D  | -441                | -0.5%                         |
| 13   | W, W  | -795                | -0.9%                         |
| 14   | D, D  | -996                | -1.2%                         |
| 15   | C, C  | -256                | -0.3%                         |
| 16   | D, C  | 2,020               | 2.9%                          |
| 17   | C, C  | 0                   | 0.0%                          |
| 18   | C, C  | 5,568               | 11.2%                         |
| 19   | C, C  | 7,823               | 19.7%                         |
| 20   | AN, W   | 1,778               | 4.0%                          |
| 21   | C, C  | 1,010               | 1.5%                          |
| 22   | W, W  | 289                 | 0.5%                          |
| 23   | W, W  | 342                 | 0.4%                          |
| 24   | W, W  | 689                 | 0.8%                          |
| 25   | W, W  | 824                 | 0.9%                          |
| 26   | W, AN   | 394                 | 0.4%                          |
| 27   | AN, AN  | 340                 | 0.4%                          |
| 28   | D, D  | -135                | -0.2%                         |
| 29   | D, D  | -924                | -1.1%                         |
| 30   | AN, BN  | -778                | -0.9%                         |
| 31   | BN, D   | -537                | -0.6%                         |
| 32   | AN, W   | -875                | -0.9%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -949                | -0.9%                         |
| 34             | D, C  | -770                | -0.8%                         |
| 35             | C, C  | 244                 | 0.3%                          |
| 36             | D, BN   | 1,198               | 1.6%                          |
| 37             | BN, AN  | -812                | -1.1%                         |
| 38             | W, W  | -414                | -0.5%                         |
| 39             | BN, D   | -234                | -0.3%                         |
| 40             | D, C  | 148                 | 0.2%                          |
| 41             | C, C  | 7,225               | 10.3%                         |
| 42             | C, C  | 13,784              | 28.4%                         |
| <b>Average</b> |   | <b>1,061</b>        | <b>2.2%</b>                   |
| <b>Maximum</b> |   | <b>13,784</b>       | <b>28.4%</b>                  |
| <b>Minimum</b> |   | <b>-1,585</b>       | <b>-2.2%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-319. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 4 (SR4) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -4,555              | -1.1%                         |
| 2    | W, W  | 2,762               | 0.7%                          |
| 3    | C, C  | -2,334              | -0.6%                         |
| 4    | C, C  | 15,982              | 5.5%                          |
| 5    | AN, W   | 10,678              | 3.4%                          |
| 6    | BN, AN  | 18,077              | 4.7%                          |
| 7    | AN, W   | -10,338             | -2.5%                         |
| 8    | D, D  | -6,166              | -1.8%                         |
| 9    | W, W  | 5,278               | 1.2%                          |
| 10   | W, W  | 496                 | 0.1%                          |
| 11   | W, AN   | -3,979              | -0.9%                         |
| 12   | D, D  | 830                 | 0.2%                          |
| 13   | W, W  | 3,780               | 0.9%                          |
| 14   | D, D  | -10,934             | -3.2%                         |
| 15   | C, C  | -3,479              | -0.9%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 5,212               | 1.6%                          |
| 17             | C, C  | -1,287              | -0.3%                         |
| 18             | C, C  | 13,560              | 4.3%                          |
| 19             | C, C  | 27,015              | 9.4%                          |
| 20             | AN, W   | 889                 | 0.3%                          |
| 21             | C, C  | -1,089              | -0.3%                         |
| 22             | W, W  | 3,471               | 0.9%                          |
| 23             | W, W  | -5,536              | -1.5%                         |
| 24             | W, W  | 2,263               | 0.6%                          |
| 25             | W, W  | 1,355               | 0.3%                          |
| 26             | W, AN   | -9,105              | -2.1%                         |
| 27             | AN, AN  | 10,244              | 2.6%                          |
| 28             | D, D  | -1,940              | -0.5%                         |
| 29             | D, D  | 2,311               | 0.6%                          |
| 30             | AN, BN  | -6,521              | -1.7%                         |
| 31             | BN, D   | -9,158              | -2.4%                         |
| 32             | AN, W   | 4,456               | 1.0%                          |
| 33             | W, W  | 3,916               | 0.9%                          |
| 34             | D, C  | -8,620              | -2.3%                         |
| 35             | C, C  | 449                 | 0.1%                          |
| 36             | D, BN   | 2,444               | 0.7%                          |
| 37             | BN, AN  | 1,030               | 0.3%                          |
| 38             | W, W  | -216                | -0.1%                         |
| 39             | BN, D   | -2,704              | -0.7%                         |
| 40             | D, C  | 979                 | 0.3%                          |
| 41             | C, C  | 9,264               | 2.7%                          |
| 42             | C, C  | 44,474              | 14.7%                         |
| <b>Average</b> |   | <b>2,459</b>        | <b>0.8%</b>                   |
| <b>Maximum</b> |   | <b>44,474</b>       | <b>14.7%</b>                  |
| <b>Minimum</b> |   | <b>-10,934</b>      | <b>-3.2%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-320. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 5 (SR5) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -1,155              | -0.3%                         |
| 2    | W, W  | -3,158              | -0.8%                         |
| 3    | C, C  | 3,150               | 0.8%                          |
| 4    | C, C  | -1,754              | -0.7%                         |
| 5    | AN, W   | -6,812              | -4.3%                         |
| 6    | BN, AN  | 2,260               | 0.7%                          |
| 7    | AN, W   | -7,471              | -2.0%                         |
| 8    | D, D  | -5,389              | -1.5%                         |
| 9    | W, W  | -875                | -0.2%                         |
| 10   | W, W  | 7,933               | 1.4%                          |
| 11   | W, AN   | -3,207              | -0.7%                         |
| 12   | D, D  | 216                 | 0.1%                          |
| 13   | W, W  | 3,292               | 0.8%                          |
| 14   | D, D  | -3,054              | -0.8%                         |
| 15   | C, C  | 1,284               | 0.4%                          |
| 16   | D, C  | -9,514              | -3.4%                         |
| 17   | C, C  | -4,347              | -1.3%                         |
| 18   | C, C  | -278                | -0.1%                         |
| 19   | C, C  | -493                | -0.2%                         |
| 20   | AN, W   | 4,239               | 1.6%                          |
| 21   | C, C  | -95                 | 0.0%                          |
| 22   | W, W  | -6,002              | -1.8%                         |
| 23   | W, W  | 3,929               | 1.0%                          |
| 24   | W, W  | -671                | -0.2%                         |
| 25   | W, W  | 2,937               | 0.6%                          |
| 26   | W, AN   | -1,830              | -0.4%                         |
| 27   | AN, AN  | -719                | -0.2%                         |
| 28   | D, D  | -4,051              | -1.0%                         |
| 29   | D, D  | 11,791              | 3.1%                          |
| 30   | AN, BN  | -6,784              | -2.0%                         |
| 31   | BN, D   | 997                 | 0.2%                          |
| 32   | AN, W   | 5,128               | 1.2%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -10,434             | -2.2%                         |
| 34             | D, C  | 19,954              | 4.7%                          |
| 35             | C, C  | -6,346              | -1.6%                         |
| 36             | D, BN   | 5,062               | 1.7%                          |
| 37             | BN, AN  | 2,912               | 0.9%                          |
| 38             | W, W  | -2,457              | -0.6%                         |
| 39             | BN, D   | -3,566              | -1.0%                         |
| 40             | D, C  | 2,930               | 0.8%                          |
| 41             | C, C  | 5,722               | 2.0%                          |
| 42             | C, C  | 15,258              | 7.2%                          |
| <b>Average</b> |   | <b>203</b>          | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>19,954</b>       | <b>7.2%</b>                   |
| <b>Minimum</b> |   | <b>-10,434</b>      | <b>-4.3%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-321. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 6 (SR6) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -339                | -0.6%                         |
| 2    | W, W  | 689                 | 0.9%                          |
| 3    | C, C  | 290                 | 0.2%                          |
| 4    | C, C  | -1,337              | -1.0%                         |
| 5    | AN, W   | -1,009              | -0.4%                         |
| 6    | BN, AN  | 1,966               | 1.3%                          |
| 7    | AN, W   | -1,678              | -1.6%                         |
| 8    | D, D  | -1,286              | -0.9%                         |
| 9    | W, W  | -43                 | -0.1%                         |
| 10   | W, W  | 1,097               | 5.1%                          |
| 11   | W, AN   | -1,373              | -4.8%                         |
| 12   | D, D  | 1,218               | 1.7%                          |
| 13   | W, W  | 1,196               | 2.6%                          |
| 14   | D, D  | -1,499              | -1.4%                         |
| 15   | C, C  | -656                | -0.5%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 2,080               | 1.4%                          |
| 17             | C, C  | -1,256              | -1.0%                         |
| 18             | C, C  | -5,038              | -2.8%                         |
| 19             | C, C  | -1,316              | -0.6%                         |
| 20             | AN, W   | -3,489              | -1.4%                         |
| 21             | C, C  | -422                | -0.3%                         |
| 22             | W, W  | -1,022              | -0.5%                         |
| 23             | W, W  | -390                | -0.3%                         |
| 24             | W, W  | 667                 | 0.7%                          |
| 25             | W, W  | 1,003               | 1.7%                          |
| 26             | W, AN   | -1,234              | -2.1%                         |
| 27             | AN, AN  | 736                 | 0.9%                          |
| 28             | D, D  | -304                | -0.3%                         |
| 29             | D, D  | 1,115               | 1.1%                          |
| 30             | AN, BN  | -1,893              | -1.8%                         |
| 31             | BN, D   | -989                | -1.0%                         |
| 32             | AN, W   | 1,909               | 2.8%                          |
| 33             | W, W  | -815                | -2.0%                         |
| 34             | D, C  | 1,206               | 1.2%                          |
| 35             | C, C  | -1,022              | -1.0%                         |
| 36             | D, BN   | -28                 | 0.0%                          |
| 37             | BN, AN  | 546                 | 0.4%                          |
| 38             | W, W  | -539                | -0.7%                         |
| 39             | BN, D   | -427                | -0.4%                         |
| 40             | D, C  | 89                  | 0.1%                          |
| 41             | C, C  | -3,080              | -2.2%                         |
| 42             | C, C  | -368                | -0.2%                         |
| <b>Average</b> |   | <b>-406</b>         | <b>-0.2%</b>                  |
| <b>Maximum</b> |   | <b>2,080</b>        | <b>5.1%</b>                   |
| <b>Minimum</b> |   | <b>-5,038</b>       | <b>-4.8%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.



Table I.1-322. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 7 (SR7) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -2,014              | -13.9%                        |
| 2    | W, W  | 164                 | 0.7%                          |
| 3    | C, C  | 461                 | 2.6%                          |
| 4    | C, C  | -3,640              | -11.7%                        |
| 5    | AN, W   | -446                | -1.0%                         |
| 6    | BN, AN  | 2,829               | 114.9%                        |
| 7    | AN, W   | -854                | -10.8%                        |
| 8    | D, D  | -1,724              | -24.1%                        |
| 9    | W, W  | -177                | -4.2%                         |
| 10   | W, W  | 1,758               | 4.5%                          |
| 11   | W, AN   | -1,058              | -3.2%                         |
| 12   | D, D  | -1,535              | -4.8%                         |
| 13   | W, W  | 3,017               | 8.5%                          |
| 14   | D, D  | -1,773              | -14.7%                        |
| 15   | C, C  | -1,033              | -98.3%                        |
| 16   | D, C  | 1,930               | 10.6%                         |
| 17   | C, C  | -1,438              | -70.3%                        |
| 18   | C, C  | -4,034              | -17.8%                        |
| 19   | C, C  | 1,237               | 4.7%                          |
| 20   | AN, W   | -2,683              | -9.8%                         |
| 21   | C, C  | 585                 | 8.1%                          |
| 22   | W, W  | -1,615              | -6.7%                         |
| 23   | W, W  | -938                | -5.4%                         |
| 24   | W, W  | 580                 | 7.1%                          |
| 25   | W, W  | 106                 | 1.2%                          |
| 26   | W, AN   | -1,478              | -10.2%                        |
| 27   | AN, AN  | 1,154               | 10.8%                         |
| 28   | D, D  | 71                  | 0.4%                          |
| 29   | D, D  | 2,006               | 3447.3%                       |
| 30   | AN, BN  | -3,118              | -21.3%                        |
| 31   | BN, D   | -139                | -3.0%                         |
| 32   | AN, W   | 1,362               | 67.5%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -636                | -13.7%                        |
| 34             | D, C  | 3,033               | 114.9%                        |
| 35             | C, C  | -2,525              | -95.5%                        |
| 36             | D, BN   | 163                 | 0.7%                          |
| 37             | BN, AN  | 1,102               | 6.0%                          |
| 38             | W, W  | -397                | -4.5%                         |
| 39             | BN, D   | -361                | -3.7%                         |
| 40             | D, C  | 736                 | 16.7%                         |
| 41             | C, C  | -2,093              | -7.1%                         |
| 42             | C, C  | -2,178              | -5.2%                         |
| <b>Average</b> |   | <b>-371</b>         | <b>80.2%</b>                  |
| <b>Maximum</b> |   | <b>3,033</b>        | <b>3447.3%</b>                |
| <b>Minimum</b> |   | <b>-4,034</b>       | <b>-98.3%</b>                 |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-323. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 8 (SR8) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -922                | -0.3%                         |
| 2    | W, W  | 359                 | 0.2%                          |
| 3    | C, C  | -273                | -0.1%                         |
| 4    | C, C  | -1,778              | -0.9%                         |
| 5    | AN, W   | 875                 | 0.3%                          |
| 6    | BN, AN  | 1,346               | 0.4%                          |
| 7    | AN, W   | -351                | -0.1%                         |
| 8    | D, D  | -131                | -0.1%                         |
| 9    | W, W  | 345                 | 0.1%                          |
| 10   | W, W  | 224                 | 0.1%                          |
| 11   | W, AN   | -93                 | -0.1%                         |
| 12   | D, D  | -898                | -0.5%                         |
| 13   | W, W  | 1,268               | 0.6%                          |
| 14   | D, D  | -482                | -0.3%                         |
| 15   | C, C  | -780                | -0.4%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 1,053               | 0.4%                          |
| 17             | C, C  | -572                | -0.3%                         |
| 18             | C, C  | -1,383              | -0.6%                         |
| 19             | C, C  | 1,403               | 0.5%                          |
| 20             | AN, W   | -670                | -0.2%                         |
| 21             | C, C  | 778                 | 0.3%                          |
| 22             | W, W  | -262                | -0.1%                         |
| 23             | W, W  | -1,129              | -0.3%                         |
| 24             | W, W  | 739                 | 0.2%                          |
| 25             | W, W  | -23                 | 0.0%                          |
| 26             | W, AN   | -842                | -0.3%                         |
| 27             | AN, AN  | 698                 | 0.3%                          |
| 28             | D, D  | 466                 | 0.2%                          |
| 29             | D, D  | 432                 | 0.2%                          |
| 30             | AN, BN  | -1,111              | -0.5%                         |
| 31             | BN, D   | 88                  | 0.0%                          |
| 32             | AN, W   | -389                | -0.1%                         |
| 33             | W, W  | 750                 | 0.2%                          |
| 34             | D, C  | 716                 | 0.3%                          |
| 35             | C, C  | -586                | -0.3%                         |
| 36             | D, BN   | -48                 | 0.0%                          |
| 37             | BN, AN  | 582                 | 0.3%                          |
| 38             | W, W  | -275                | -0.1%                         |
| 39             | BN, D   | -28                 | 0.0%                          |
| 40             | D, C  | 102                 | 0.0%                          |
| 41             | C, C  | -348                | -0.1%                         |
| 42             | C, C  | -955                | -0.4%                         |
| <b>Average</b> |   | <b>-50</b>          | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>1,403</b>        | <b>0.6%</b>                   |
| <b>Minimum</b> |   | <b>-1,778</b>       | <b>-0.9%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-324. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 9 (SR9) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -4,827              | -1.5%                         |
| 2    | W, W  | 1,268               | 0.3%                          |
| 3    | C, C  | 985                 | 0.2%                          |
| 4    | C, C  | -9,294              | -2.6%                         |
| 5    | AN, W   | -1,029              | -0.6%                         |
| 6    | BN, AN  | 10,539              | 3.1%                          |
| 7    | AN, W   | -5,012              | -1.8%                         |
| 8    | D, D  | -5,157              | -1.4%                         |
| 9    | W, W  | 553                 | 0.2%                          |
| 10   | W, W  | 3,104               | 0.8%                          |
| 11   | W, AN   | -5,133              | -1.1%                         |
| 12   | D, D  | 1,964               | 0.4%                          |
| 13   | W, W  | 3,312               | 0.9%                          |
| 14   | D, D  | -8,286              | -1.9%                         |
| 15   | C, C  | -3,846              | -1.0%                         |
| 16   | D, C  | 6,655               | 2.1%                          |
| 17   | C, C  | 4,014               | 1.0%                          |
| 18   | C, C  | -2,618              | -0.8%                         |
| 19   | C, C  | 13,475              | 4.5%                          |
| 20   | AN, W   | -17,001             | -8.2%                         |
| 21   | C, C  | 170                 | 0.0%                          |
| 22   | W, W  | -5,477              | -2.8%                         |
| 23   | W, W  | -4,440              | -1.5%                         |
| 24   | W, W  | -1,048              | -0.3%                         |
| 25   | W, W  | 633                 | 0.2%                          |
| 26   | W, AN   | -6,484              | -1.5%                         |
| 27   | AN, AN  | 5,325               | 1.3%                          |
| 28   | D, D  | -2,790              | -0.6%                         |
| 29   | D, D  | 8,700               | 2.2%                          |
| 30   | AN, BN  | -9,695              | -2.9%                         |
| 31   | BN, D   | -2,092              | -0.6%                         |
| 32   | AN, W   | 5,119               | 1.3%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -4,898              | -1.4%                         |
| 34             | D, C  | 6,742               | 1.5%                          |
| 35             | C, C  | -7,393              | -1.7%                         |
| 36             | D, BN   | 643                 | 0.2%                          |
| 37             | BN, AN  | 6,546               | 1.9%                          |
| 38             | W, W  | -3,311              | -1.1%                         |
| 39             | BN, D   | -2,352              | -0.6%                         |
| 40             | D, C  | 672                 | 0.2%                          |
| 41             | C, C  | -10,191             | -2.4%                         |
| 42             | C, C  | 4,308               | 1.3%                          |
| <b>Average</b> |   | <b>-896</b>         | <b>-0.4%</b>                  |
| <b>Maximum</b> |   | <b>13,475</b>       | <b>4.5%</b>                   |
| <b>Minimum</b> |   | <b>-17,001</b>      | <b>-8.2%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-325. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 10 (SR10) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -4,104              | -4.7%                         |
| 2    | W, W  | -2,216              | -2.5%                         |
| 3    | C, C  | -4,105              | -4.6%                         |
| 4    | C, C  | -13,822             | -61.6%                        |
| 5    | AN, W   | -7,626              | -45.3%                        |
| 6    | BN, AN  | -3,080              | -4.6%                         |
| 7    | AN, W   | -5,590              | -12.9%                        |
| 8    | D, D  | -3,698              | -4.4%                         |
| 9    | W, W  | -3,513              | -5.0%                         |
| 10   | W, W  | -2,931              | -3.5%                         |
| 11   | W, AN   | -2,553              | -2.2%                         |
| 12   | D, D  | -3,065              | -2.5%                         |
| 13   | W, W  | -2,685              | -3.3%                         |
| 14   | D, D  | -2,770              | -2.4%                         |
| 15   | C, C  | -2,353              | -2.3%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -1,401              | -1.8%                         |
| 17             | C, C  | -815                | -1.4%                         |
| 18             | C, C  | -2,961              | -53.8%                        |
| 19             | C, C  | -2,912              | -24.5%                        |
| 20             | AN, W   | -1,134              | -5.8%                         |
| 21             | C, C  | -3,407              | -10.5%                        |
| 22             | W, W  | -3,091              | -51.7%                        |
| 23             | W, W  | -1,697              | -3.1%                         |
| 24             | W, W  | -2,161              | -3.0%                         |
| 25             | W, W  | -3,703              | -4.9%                         |
| 26             | W, AN   | -2,817              | -2.2%                         |
| 27             | AN, AN  | -2,886              | -2.8%                         |
| 28             | D, D  | -3,689              | -3.4%                         |
| 29             | D, D  | -3,987              | -4.0%                         |
| 30             | AN, BN  | -3,184              | -3.4%                         |
| 31             | BN, D   | -1,875              | -1.9%                         |
| 32             | AN, W   | -2,566              | -2.5%                         |
| 33             | W, W  | -3,396              | -2.9%                         |
| 34             | D, C  | -2,087              | -1.7%                         |
| 35             | C, C  | -2,390              | -2.7%                         |
| 36             | D, BN   | -1,612              | -1.9%                         |
| 37             | BN, AN  | -493                | -0.7%                         |
| 38             | W, W  | -578                | -0.5%                         |
| 39             | BN, D   | -727                | -0.5%                         |
| 40             | D, C  | -2,570              | -2.2%                         |
| 41             | C, C  | -14,233             | -29.9%                        |
| 42             | C, C  | -9,918              | -118.1%                       |
| <b>Average</b> |   | <b>-3,486</b>       | <b>-12.0%</b>                 |
| <b>Maximum</b> |   | <b>-493</b>         | <b>-0.5%</b>                  |
| <b>Minimum</b> |   | <b>-14,233</b>      | <b>-118.1%</b>                |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-326. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 11 (SR11) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -1,291              | -3.1%                         |
| 2    | W, W  | -1,049              | -2.3%                         |
| 3    | C, C  | -1,454              | -7.3%                         |
| 4    | C, C  | 17,228              | 18.1%                         |
| 5    | AN, W   | -12,816             | -17.8%                        |
| 6    | BN, AN  | -1,137              | -3.6%                         |
| 7    | AN, W   | -1,909              | -25.4%                        |
| 8    | D, D  | -887                | -4.5%                         |
| 9    | W, W  | -1,978              | -10.1%                        |
| 10   | W, W  | -1,709              | -5.4%                         |
| 11   | W, AN   | -928                | -1.0%                         |
| 12   | D, D  | -1,346              | -1.9%                         |
| 13   | W, W  | -3,058              | -5.8%                         |
| 14   | D, D  | 977                 | 2.5%                          |
| 15   | C, C  | -307                | -1.4%                         |
| 16   | D, C  | -308                | -0.5%                         |
| 17   | C, C  | 8                   | 0.0%                          |
| 18   | C, C  | -388                | -0.5%                         |
| 19   | C, C  | -190                | -0.2%                         |
| 20   | AN, W   | -2,632              | -6.1%                         |
| 21   | C, C  | -3,796              | -8.2%                         |
| 22   | W, W  | -3,107              | -8.0%                         |
| 23   | W, W  | -1,256              | -12.1%                        |
| 24   | W, W  | -4,580              | -21.8%                        |
| 25   | W, W  | 5,508               | 12.3%                         |
| 26   | W, AN   | 1,087               | 1.0%                          |
| 27   | AN, AN  | -1,332              | -2.6%                         |
| 28   | D, D  | 257                 | 0.5%                          |
| 29   | D, D  | -666                | -1.9%                         |
| 30   | AN, BN  | -589                | -1.7%                         |
| 31   | BN, D   | -614                | -1.7%                         |
| 32   | AN, W   | 3,956               | 7.8%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -4,232              | -6.4%                         |
| 34             | D, C  | 141                 | 0.2%                          |
| 35             | C, C  | -412                | -8.8%                         |
| 36             | D, BN   | -592                | -3.2%                         |
| 37             | BN, AN  | 381                 | 5.2%                          |
| 38             | W, W  | -276                | -60.7%                        |
| 39             | BN, D   | -130                | -0.2%                         |
| 40             | D, C  | 97                  | 0.7%                          |
| 41             | C, C  | 16,905              | 27.4%                         |
| 42             | C, C  | -13,451             | -14.8%                        |
| <b>Average</b> |   | <b>-521</b>         | <b>-4.1%</b>                  |
| <b>Maximum</b> |   | <b>17,228</b>       | <b>27.4%</b>                  |
| <b>Minimum</b> |   | <b>-13,451</b>      | <b>-60.7%</b>                 |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-327. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 12 (SR12) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -1,228              | -1.4%                         |
| 2    | W, W  | -1,028              | -1.3%                         |
| 3    | C, C  | -1,362              | -1.3%                         |
| 4    | C, C  | -1,795              | -1.0%                         |
| 5    | AN, W   | -1,138              | -0.6%                         |
| 6    | BN, AN  | -1,070              | -0.6%                         |
| 7    | AN, W   | -1,155              | -0.8%                         |
| 8    | D, D  | -1,141              | -1.0%                         |
| 9    | W, W  | -1,043              | -1.1%                         |
| 10   | W, W  | -919                | -1.2%                         |
| 11   | W, AN   | -838                | -1.4%                         |
| 12   | D, D  | -970                | -1.3%                         |
| 13   | W, W  | -1,015              | -1.3%                         |
| 14   | D, D  | -802                | -0.9%                         |
| 15   | C, C  | -864                | -0.6%                         |



| Year           | WY Type (Sacramento Valley,<br>San Joaquin Valley) | Alt4 minus NAA<br>(AF) | Alt4 minus NAA<br>(% Difference) |
|----------------|--|------------------------|----------------------------------|
| 16             | D, C   | -651                   | -0.3%                            |
| 17             | C, C   | -103                   | 0.0%                             |
| 18             | C, C   | -426                   | -0.2%                            |
| 19             | C, C   | -197                   | -0.1%                            |
| 20             | AN, W  | -1,603                 | -0.8%                            |
| 21             | C, C   | -1,172                 | -0.6%                            |
| 22             | W, W   | -982                   | -0.6%                            |
| 23             | W, W   | -645                   | -0.5%                            |
| 24             | W, W   | -745                   | -0.6%                            |
| 25             | W, W   | -849                   | -1.0%                            |
| 26             | W, AN  | -883                   | -1.7%                            |
| 27             | AN, AN   | -904                   | -1.1%                            |
| 28             | D, D   | -1,186                 | -1.4%                            |
| 29             | D, D   | -1,360                 | -1.4%                            |
| 30             | AN, BN   | -1,200                 | -1.2%                            |
| 31             | BN, D  | -1,005                 | -1.0%                            |
| 32             | AN, W  | -890                   | -1.3%                            |
| 33             | W, W   | -958                   | -1.7%                            |
| 34             | D, C   | -984                   | -1.4%                            |
| 35             | C, C   | -1,264                 | -1.0%                            |
| 36             | D, BN  | -685                   | -0.5%                            |
| 37             | BN, AN   | -57                    | -0.1%                            |
| 38             | W, W   | -539                   | -0.5%                            |
| 39             | BN, D  | -292                   | -0.5%                            |
| 40             | D, C   | -258                   | -0.2%                            |
| 41             | C, C   | -871                   | -0.4%                            |
| 42             | C, C   | -516                   | -0.2%                            |
| <b>Average</b> |  | <b>-895</b>            | <b>-0.9%</b>                     |
| <b>Maximum</b> |  | <b>-57</b>             | <b>0.0%</b>                      |
| <b>Minimum</b> |  | <b>-1,795</b>          | <b>-1.7%</b>                     |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-328. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 13 (SR13) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -1,482              | -0.3%                         |
| 2    | W, W  | -1,628              | -0.3%                         |
| 3    | C, C  | -2,109              | -0.3%                         |
| 4    | C, C  | -7,284              | -1.2%                         |
| 5    | AN, W   | -4,077              | -0.5%                         |
| 6    | BN, AN  | -2,611              | -0.4%                         |
| 7    | AN, W   | -2,441              | -0.3%                         |
| 8    | D, D  | -2,427              | -0.4%                         |
| 9    | W, W  | -2,270              | -0.3%                         |
| 10   | W, W  | -2,292              | -0.3%                         |
| 11   | W, AN   | -2,232              | -0.4%                         |
| 12   | D, D  | -2,611              | -0.5%                         |
| 13   | W, W  | -2,439              | -0.4%                         |
| 14   | D, D  | -2,606              | -0.4%                         |
| 15   | C, C  | -2,249              | -0.4%                         |
| 16   | D, C  | -2,038              | -0.3%                         |
| 17   | C, C  | -2,068              | -0.3%                         |
| 18   | C, C  | -3,221              | -0.5%                         |
| 19   | C, C  | -3,065              | -0.4%                         |
| 20   | AN, W   | -2,438              | -0.3%                         |
| 21   | C, C  | -2,079              | -0.3%                         |
| 22   | W, W  | -2,176              | -0.3%                         |
| 23   | W, W  | -2,005              | -0.3%                         |
| 24   | W, W  | -2,334              | -0.3%                         |
| 25   | W, W  | -2,314              | -0.3%                         |
| 26   | W, AN   | -2,236              | -0.4%                         |
| 27   | AN, AN  | -2,320              | -0.4%                         |
| 28   | D, D  | -2,502              | -0.4%                         |
| 29   | D, D  | -2,863              | -0.5%                         |
| 30   | AN, BN  | -2,877              | -0.5%                         |
| 31   | BN, D   | -2,755              | -0.5%                         |
| 32   | AN, W   | -2,484              | -0.4%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -2,584              | -0.4%                         |
| 34             | D, C  | -2,869              | -0.5%                         |
| 35             | C, C  | -2,647              | -0.4%                         |
| 36             | D, BN   | -2,418              | -0.4%                         |
| 37             | BN, AN  | -2,107              | -0.4%                         |
| 38             | W, W  | -2,333              | -0.3%                         |
| 39             | BN, D   | -2,250              | -0.4%                         |
| 40             | D, C  | -2,469              | -0.4%                         |
| 41             | C, C  | -9,316              | -1.4%                         |
| 42             | C, C  | -6,102              | -0.9%                         |
| <b>Average</b> |   | <b>-2,801</b>       | <b>-0.4%</b>                  |
| <b>Maximum</b> |   | <b>-1,482</b>       | <b>-0.3%</b>                  |
| <b>Minimum</b> |   | <b>-9,316</b>       | <b>-1.4%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-329. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 14 (SR14) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -45                 | -0.1%                         |
| 2    | W, W  | 575                 | 1.1%                          |
| 3    | C, C  | 576                 | 1.3%                          |
| 4    | C, C  | 314                 | 0.7%                          |
| 5    | AN, W   | 61                  | 0.1%                          |
| 6    | BN, AN  | 235                 | 0.4%                          |
| 7    | AN, W   | 143                 | 0.2%                          |
| 8    | D, D  | -23                 | 0.0%                          |
| 9    | W, W  | -1                  | 0.0%                          |
| 10   | W, W  | -5                  | 0.0%                          |
| 11   | W, AN   | 564                 | 1.0%                          |
| 12   | D, D  | 164                 | 0.3%                          |
| 13   | W, W  | -70                 | -0.1%                         |
| 14   | D, D  | -638                | -1.4%                         |
| 15   | C, C  | 15                  | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 49                  | 0.1%                          |
| 17             | C, C  | 15                  | 0.0%                          |
| 18             | C, C  | 4                   | 0.0%                          |
| 19             | C, C  | -55                 | -0.1%                         |
| 20             | AN, W   | -67                 | -0.1%                         |
| 21             | C, C  | 111                 | 0.2%                          |
| 22             | W, W  | 3                   | 0.0%                          |
| 23             | W, W  | -6                  | 0.0%                          |
| 24             | W, W  | 21                  | 0.0%                          |
| 25             | W, W  | 2                   | 0.0%                          |
| 26             | W, AN   | -14                 | 0.0%                          |
| 27             | AN, AN  | 6                   | 0.0%                          |
| 28             | D, D  | -68                 | -0.1%                         |
| 29             | D, D  | -22                 | 0.0%                          |
| 30             | AN, BN  | -24                 | -0.1%                         |
| 31             | BN, D   | 5                   | 0.0%                          |
| 32             | AN, W   | -50                 | -0.1%                         |
| 33             | W, W  | 159                 | 0.3%                          |
| 34             | D, C  | -7                  | 0.0%                          |
| 35             | C, C  | -32                 | -0.1%                         |
| 36             | D, BN   | 55                  | 0.1%                          |
| 37             | BN, AN  | 103                 | 0.2%                          |
| 38             | W, W  | 13                  | 0.0%                          |
| 39             | BN, D   | 52                  | 0.1%                          |
| 40             | D, C  | 151                 | 0.3%                          |
| 41             | C, C  | 3                   | 0.0%                          |
| 42             | C, C  | 10                  | 0.0%                          |
| <b>Average</b> |   | <b>54</b>           | <b>0.1%</b>                   |
| <b>Maximum</b> |   | <b>576</b>          | <b>1.3%</b>                   |
| <b>Minimum</b> |   | <b>-638</b>         | <b>-1.4%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-330. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 15 (SR15) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -4,067              | -0.8%                         |
| 2    | W, W  | -4,393              | -1.1%                         |
| 3    | C, C  | -4,982              | -1.1%                         |
| 4    | C, C  | -5,791              | -1.3%                         |
| 5    | AN, W   | -5,912              | -0.6%                         |
| 6    | BN, AN  | -5,410              | -1.1%                         |
| 7    | AN, W   | -9,495              | -1.2%                         |
| 8    | D, D  | -6,002              | -1.5%                         |
| 9    | W, W  | -7,839              | -1.2%                         |
| 10   | W, W  | -7,965              | -1.5%                         |
| 11   | W, AN   | -5,810              | -1.5%                         |
| 12   | D, D  | -5,833              | -1.4%                         |
| 13   | W, W  | -7,765              | -1.4%                         |
| 14   | D, D  | -6,195              | -1.5%                         |
| 15   | C, C  | -3,943              | -1.1%                         |
| 16   | D, C  | -3,756              | -0.9%                         |
| 17   | C, C  | -3,800              | -0.9%                         |
| 18   | C, C  | -4,165              | -0.9%                         |
| 19   | C, C  | -4,636              | -1.0%                         |
| 20   | AN, W   | -4,460              | -0.9%                         |
| 21   | C, C  | -4,823              | -0.9%                         |
| 22   | W, W  | -7,275              | -0.8%                         |
| 23   | W, W  | -6,890              | -1.0%                         |
| 24   | W, W  | -9,689              | -1.6%                         |
| 25   | W, W  | -7,734              | -1.5%                         |
| 26   | W, AN   | -5,271              | -1.5%                         |
| 27   | AN, AN  | -6,881              | -1.6%                         |
| 28   | D, D  | -7,210              | -1.7%                         |
| 29   | D, D  | -6,915              | -1.8%                         |
| 30   | AN, BN  | -6,179              | -1.5%                         |
| 31   | BN, D   | -6,894              | -1.7%                         |
| 32   | AN, W   | -7,923              | -1.3%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -11,454             | -1.7%                         |
| 34             | D, C  | -6,579              | -1.6%                         |
| 35             | C, C  | -5,973              | -1.5%                         |
| 36             | D, BN   | -4,594              | -1.1%                         |
| 37             | BN, AN  | -5,519              | -0.7%                         |
| 38             | W, W  | -10,112             | -1.3%                         |
| 39             | BN, D   | -4,317              | -0.9%                         |
| 40             | D, C  | -2,739              | -0.7%                         |
| 41             | C, C  | -2,962              | -0.6%                         |
| 42             | C, C  | -4,889              | -1.0%                         |
| <b>Average</b> |   | <b>-6,072</b>       | <b>-1.2%</b>                  |
| <b>Maximum</b> |   | <b>-2,739</b>       | <b>-0.6%</b>                  |
| <b>Minimum</b> |   | <b>-11,454</b>      | <b>-1.8%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-331. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 16 (SR16) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -178                | -0.5%                         |
| 2    | W, W  | -198                | -0.7%                         |
| 3    | C, C  | -217                | -0.4%                         |
| 4    | C, C  | -141                | -0.2%                         |
| 5    | AN, W   | -195                | -0.3%                         |
| 6    | BN, AN  | -206                | -0.5%                         |
| 7    | AN, W   | -192                | -0.5%                         |
| 8    | D, D  | -257                | -0.6%                         |
| 9    | W, W  | -232                | -0.6%                         |
| 10   | W, W  | -279                | -0.9%                         |
| 11   | W, AN   | -299                | -1.8%                         |
| 12   | D, D  | -333                | -1.2%                         |
| 13   | W, W  | -387                | -1.4%                         |
| 14   | D, D  | -406                | -1.5%                         |
| 15   | C, C  | -422                | -1.0%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -411                | -0.8%                         |
| 17             | C, C  | -431                | -0.7%                         |
| 18             | C, C  | -408                | -0.6%                         |
| 19             | C, C  | -370                | -0.5%                         |
| 20             | AN, W   | -368                | -0.6%                         |
| 21             | C, C  | -380                | -0.7%                         |
| 22             | W, W  | -342                | -0.7%                         |
| 23             | W, W  | -318                | -0.8%                         |
| 24             | W, W  | -373                | -1.1%                         |
| 25             | W, W  | -412                | -1.3%                         |
| 26             | W, AN   | -444                | -1.8%                         |
| 27             | AN, AN  | -453                | -1.6%                         |
| 28             | D, D  | -499                | -1.2%                         |
| 29             | D, D  | -569                | -1.1%                         |
| 30             | AN, BN  | -627                | -1.1%                         |
| 31             | BN, D   | -569                | -1.0%                         |
| 32             | AN, W   | -558                | -1.3%                         |
| 33             | W, W  | -579                | -2.1%                         |
| 34             | D, C  | -654                | -1.4%                         |
| 35             | C, C  | -595                | -1.0%                         |
| 36             | D, BN   | -564                | -0.9%                         |
| 37             | BN, AN  | -544                | -1.0%                         |
| 38             | W, W  | -514                | -1.5%                         |
| 39             | BN, D   | -554                | -1.2%                         |
| 40             | D, C  | -641                | -0.8%                         |
| 41             | C, C  | -499                | -0.5%                         |
| 42             | C, C  | -115                | -0.1%                         |
| <b>Average</b> |   | <b>-398</b>         | <b>-0.9%</b>                  |
| <b>Maximum</b> |   | <b>-115</b>         | <b>-0.1%</b>                  |
| <b>Minimum</b> |   | <b>-654</b>         | <b>-2.1%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-332. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 17 (SR17) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -245                | -1.2%                         |
| 2    | W, W  | -206                | -0.4%                         |
| 3    | C, C  | -187                | -0.2%                         |
| 4    | C, C  | -32                 | 0.0%                          |
| 5    | AN, W   | -312                | -0.3%                         |
| 6    | BN, AN  | -262                | -3.5%                         |
| 7    | AN, W   | -355                | -1.0%                         |
| 8    | D, D  | -236                | -2.0%                         |
| 9    | W, W  | -256                | -1.0%                         |
| 10   | W, W  | -381                | -0.8%                         |
| 11   | W, AN   | -383                | -0.4%                         |
| 12   | D, D  | -263                | -3.3%                         |
| 13   | W, W  | -428                | -3.2%                         |
| 14   | D, D  | -441                | -6.8%                         |
| 15   | C, C  | -133                | -0.2%                         |
| 16   | D, C  | -52                 | -0.1%                         |
| 17   | C, C  | 0                   | 0.0%                          |
| 18   | C, C  | -24                 | 0.0%                          |
| 19   | C, C  | -11                 | 0.0%                          |
| 20   | AN, W   | -368                | -0.3%                         |
| 21   | C, C  | -369                | -0.3%                         |
| 22   | W, W  | -407                | -0.6%                         |
| 23   | W, W  | -517                | -1.5%                         |
| 24   | W, W  | -377                | -2.5%                         |
| 25   | W, W  | -471                | -20.7%                        |
| 26   | W, AN   | -443                | -2.3%                         |
| 27   | AN, AN  | -465                | -2.7%                         |
| 28   | D, D  | -458                | -0.8%                         |
| 29   | D, D  | -340                | -0.5%                         |
| 30   | AN, BN  | -406                | -0.5%                         |
| 31   | BN, D   | -282                | -0.3%                         |
| 32   | AN, W   | -745                | -1.0%                         |



| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -846                | -2.9%                         |
| 34             | D, C  | -746                | -1.2%                         |
| 35             | C, C  | -477                | -0.6%                         |
| 36             | D, BN   | -418                | -0.5%                         |
| 37             | BN, AN  | -743                | -0.5%                         |
| 38             | W, W  | -1,035              | -1.4%                         |
| 39             | BN, D   | -884                | -1.7%                         |
| 40             | D, C  | -373                | -0.3%                         |
| 41             | C, C  | -314                | -0.2%                         |
| 42             | C, C  | -9                  | 0.0%                          |
| <b>Average</b> |   | <b>-374</b>         | <b>-1.6%</b>                  |
| <b>Maximum</b> |   | <b>0</b>            | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-1,035</b>       | <b>-20.7%</b>                 |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-333. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 18 (SR18) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | -3,629              | -6.5%                         |
| 2    | W, W  | -3,644              | -5.1%                         |
| 3    | C, C  | -2,130              | -6.5%                         |
| 4    | C, C  | -917                | -2.2%                         |
| 5    | AN, W   | -1,624              | -1.3%                         |
| 6    | BN, AN  | -5,814              | -2.8%                         |
| 7    | AN, W   | -4,503              | -1.9%                         |
| 8    | D, D  | -4,642              | -1.6%                         |
| 9    | W, W  | -5,009              | -1.7%                         |
| 10   | W, W  | -6,707              | -0.6%                         |
| 11   | W, AN   | -5,982              | -0.5%                         |
| 12   | D, D  | -8,780              | -1.3%                         |
| 13   | W, W  | -8,044              | -1.0%                         |
| 14   | D, D  | -7,701              | -1.1%                         |
| 15   | C, C  | -6,390              | -1.7%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | -6,120              | -3.8%                         |
| 17             | C, C  | -4,298              | -72.8%                        |
| 18             | C, C  | -3,056              | -5.7%                         |
| 19             | C, C  | -1,552              | -2.1%                         |
| 20             | AN, W   | -1,658              | -1.6%                         |
| 21             | C, C  | -1,497              | -17.4%                        |
| 22             | W, W  | -5,334              | -17.9%                        |
| 23             | W, W  | -7,169              | -2.4%                         |
| 24             | W, W  | -26,124             | -11.6%                        |
| 25             | W, W  | -17,303             | -3.4%                         |
| 26             | W, AN   | -12,831             | -1.6%                         |
| 27             | AN, AN  | -11,923             | -2.1%                         |
| 28             | D, D  | -11,494             | -2.6%                         |
| 29             | D, D  | -11,534             | -5.5%                         |
| 30             | AN, BN  | -11,124             | -15.0%                        |
| 31             | BN, D   | -8,325              | -23.4%                        |
| 32             | AN, W   | -10,617             | -15.3%                        |
| 33             | W, W  | -13,175             | -7.1%                         |
| 34             | D, C  | -10,818             | -6.8%                         |
| 35             | C, C  | -5,624              | -11.1%                        |
| 36             | D, BN   | -2,811              | -3.6%                         |
| 37             | BN, AN  | -2,947              | -3.5%                         |
| 38             | W, W  | -18,480             | -7.9%                         |
| 39             | BN, D   | -13,358             | -5.0%                         |
| 40             | D, C  | -8,769              | -25.2%                        |
| 41             | C, C  | -1,984              | -3.2%                         |
| 42             | C, C  | -1,261              | -1.3%                         |
| <b>Average</b> |   | <b>-7,302</b>       | <b>-7.5%</b>                  |
| <b>Maximum</b> |   | <b>-917</b>         | <b>-0.5%</b>                  |
| <b>Minimum</b> |   | <b>-26,124</b>      | <b>-72.8%</b>                 |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-334. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 19 (SR19) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 0                   | 0.0%                          |
| 2    | W, W  | 0                   | 0.0%                          |
| 3    | C, C  | 0                   | 0.0%                          |
| 4    | C, C  | 0                   | 0.0%                          |
| 5    | AN, W   | 0                   | 0.0%                          |
| 6    | BN, AN  | 0                   | 0.0%                          |
| 7    | AN, W   | 0                   | 0.0%                          |
| 8    | D, D  | 0                   | 0.0%                          |
| 9    | W, W  | 0                   | 0.0%                          |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | -1                  | 0.0%                          |
| 12   | D, D  | -1                  | -0.1%                         |
| 13   | W, W  | -3                  | 0.0%                          |
| 14   | D, D  | -1                  | 0.0%                          |
| 15   | C, C  | 0                   | 0.0%                          |
| 16   | D, C  | 0                   | 0.0%                          |
| 17   | C, C  | 0                   | 0.0%                          |
| 18   | C, C  | 0                   | 0.0%                          |
| 19   | C, C  | 0                   | 0.0%                          |
| 20   | AN, W   | 0                   | 0.0%                          |
| 21   | C, C  | 0                   | 0.0%                          |
| 22   | W, W  | 0                   | 0.0%                          |
| 23   | W, W  | 0                   | 0.0%                          |
| 24   | W, W  | 1                   | 0.0%                          |
| 25   | W, W  | -4                  | 0.0%                          |
| 26   | W, AN   | -5                  | 0.0%                          |
| 27   | AN, AN  | -2                  | -0.9%                         |
| 28   | D, D  | -1                  | -0.1%                         |
| 29   | D, D  | 0                   | 0.0%                          |
| 30   | AN, BN  | 0                   | 0.0%                          |
| 31   | BN, D   | 0                   | 0.0%                          |
| 32   | AN, W   | -2                  | -0.1%                         |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -3                  | 0.0%                          |
| 34             | D, C  | -2                  | 0.0%                          |
| 35             | C, C  | 0                   | 0.0%                          |
| 36             | D, BN   | 0                   | 0.0%                          |
| 37             | BN, AN  | 0                   | 0.0%                          |
| 38             | W, W  | -2                  | -0.1%                         |
| 39             | BN, D   | -1                  | -0.2%                         |
| 40             | D, C  | 0                   | 0.0%                          |
| 41             | C, C  | 0                   | 0.0%                          |
| 42             | C, C  | 0                   | 0.0%                          |
| <b>Average</b> |   | <b>-1</b>           | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>1</b>            | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-5</b>           | <b>-0.9%</b>                  |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-335. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 20 (SR20) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 0                   | 0.0%                          |
| 2    | W, W  | 0                   | 0.0%                          |
| 3    | C, C  | 0                   | 0.0%                          |
| 4    | C, C  | 0                   | 0.0%                          |
| 5    | AN, W   | 0                   | 0.0%                          |
| 6    | BN, AN  | 0                   | 0.0%                          |
| 7    | AN, W   | 0                   | 0.0%                          |
| 8    | D, D  | 0                   | 0.0%                          |
| 9    | W, W  | 0                   | 0.0%                          |
| 10   | W, W  | 0                   | 0.0%                          |
| 11   | W, AN   | 0                   | 0.0%                          |
| 12   | D, D  | 0                   | 0.0%                          |
| 13   | W, W  | 0                   | 0.0%                          |
| 14   | D, D  | 0                   | 0.0%                          |
| 15   | C, C  | 0                   | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 16             | D, C  | 0                   | 0.0%                          |
| 17             | C, C  | 0                   | 0.0%                          |
| 18             | C, C  | 0                   | 0.0%                          |
| 19             | C, C  | 0                   | 0.0%                          |
| 20             | AN, W   | 0                   | 0.0%                          |
| 21             | C, C  | 0                   | 0.0%                          |
| 22             | W, W  | 0                   | 0.0%                          |
| 23             | W, W  | 0                   | 0.0%                          |
| 24             | W, W  | 0                   | 0.0%                          |
| 25             | W, W  | 0                   | 0.0%                          |
| 26             | W, AN   | 0                   | 0.0%                          |
| 27             | AN, AN  | 0                   | 0.0%                          |
| 28             | D, D  | 0                   | 0.0%                          |
| 29             | D, D  | 0                   | 0.0%                          |
| 30             | AN, BN  | 0                   | 0.0%                          |
| 31             | BN, D   | 0                   | 0.0%                          |
| 32             | AN, W   | 0                   | 0.0%                          |
| 33             | W, W  | 0                   | 0.0%                          |
| 34             | D, C  | 0                   | 0.0%                          |
| 35             | C, C  | 0                   | 0.0%                          |
| 36             | D, BN   | 0                   | 0.0%                          |
| 37             | BN, AN  | 0                   | 0.0%                          |
| 38             | W, W  | -1                  | 0.0%                          |
| 39             | BN, D   | -1                  | 0.0%                          |
| 40             | D, C  | 0                   | 0.0%                          |
| 41             | C, C  | -1                  | 0.0%                          |
| 42             | C, C  | 0                   | 0.0%                          |
| <b>Average</b> |   | <b>0</b>            | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>0</b>            | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-1</b>           | <b>0.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

Table I.1-336. Simulated Change in Groundwater-Surface Water Interaction Flow in C2VSimFG Subregion 21 (SR21) for Alternative 4 Compared to the No Action Alternative

| Year | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|------|---|---------------------|-------------------------------|
| 1    | W, W  | 0                   | 0.0%                          |
| 2    | W, W  | 0                   | 0.0%                          |
| 3    | C, C  | 0                   | 0.0%                          |
| 4    | C, C  | 0                   | 0.0%                          |
| 5    | AN, W   | 0                   | 0.0%                          |
| 6    | BN, AN  | 0                   | 0.0%                          |
| 7    | AN, W   | 0                   | 0.0%                          |
| 8    | D, D  | 0                   | 0.0%                          |
| 9    | W, W  | 0                   | 0.0%                          |
| 10   | W, W  | -2                  | 0.0%                          |
| 11   | W, AN   | -1                  | 0.0%                          |
| 12   | D, D  | 0                   | 0.0%                          |
| 13   | W, W  | -1                  | 0.0%                          |
| 14   | D, D  | 0                   | 0.0%                          |
| 15   | C, C  | 0                   | 0.0%                          |
| 16   | D, C  | 0                   | 0.0%                          |
| 17   | C, C  | 0                   | 0.0%                          |
| 18   | C, C  | 0                   | 0.0%                          |
| 19   | C, C  | 0                   | 0.0%                          |
| 20   | AN, W   | 0                   | 0.0%                          |
| 21   | C, C  | 0                   | 0.0%                          |
| 22   | W, W  | 0                   | 0.0%                          |
| 23   | W, W  | -1                  | 0.0%                          |
| 24   | W, W  | -1                  | 0.0%                          |
| 25   | W, W  | -4                  | 0.0%                          |
| 26   | W, AN   | -3                  | 0.0%                          |
| 27   | AN, AN  | -1                  | 0.0%                          |
| 28   | D, D  | -1                  | 0.0%                          |
| 29   | D, D  | 0                   | 0.0%                          |
| 30   | AN, BN  | 0                   | 0.0%                          |
| 31   | BN, D   | 0                   | 0.0%                          |
| 32   | AN, W   | -1                  | 0.0%                          |

| Year           | WY Type (Sacramento Valley, San Joaquin Valley) | Alt4 minus NAA (AF) | Alt4 minus NAA (% Difference) |
|----------------|---|---------------------|-------------------------------|
| 33             | W, W  | -4                  | 0.0%                          |
| 34             | D, C  | -1                  | 0.0%                          |
| 35             | C, C  | 0                   | 0.0%                          |
| 36             | D, BN   | 0                   | 0.0%                          |
| 37             | BN, AN  | 0                   | 0.0%                          |
| 38             | W, W  | -1                  | 0.0%                          |
| 39             | BN, D   | -1                  | 0.0%                          |
| 40             | D, C  | 0                   | 0.0%                          |
| 41             | C, C  | 0                   | 0.0%                          |
| 42             | C, C  | 0                   | 0.0%                          |
| <b>Average</b> |   | <b>0</b>            | <b>0.0%</b>                   |
| <b>Maximum</b> |   | <b>0</b>            | <b>0.0%</b>                   |
| <b>Minimum</b> |   | <b>-4</b>           | <b>0.0%</b>                   |

AF = acre-feet; WY = water year; NAA = No Action Alternative; Alt = Alternative.  
Water Year Types: W = wet, AN = above normal, BN = below normal, D = dry; C = critical.

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