Appendix 9E

Weighted Useable Area Analysis

This appendix provides information about the methods and assumptions used for the Remanded Biological Opinions on the Coordinated Long-Term Operation of the Central Valley Project (CVP) and State Water Project (SWP) Environmental Impact Statement (EIS) analysis. It is organized in the following sections:

- Section 9E.1.1: Methodology
  - The fish and aquatic resources impacts analysis used weighted useable area (WUA) as a metric for evaluating changes in physical habitat related to flow. This section describes the overall analytical approach and assumptions. The following species are analyzed in this appendix:
    - Clear Creek Spring-run Chinook Salmon
    - Clear Creek Fall-run Chinook Salmon
    - Clear Creek Steelhead/Rainbow Trout
    - Sacramento River Fall-run Chinook Salmon
    - Sacramento River Late-Fall-run Chinook Salmon
    - Sacramento River Winter-run Chinook Salmon
    - Sacramento River Steelhead/Rainbow Trout
    - Lower Feather River Fall-run Chinook Salmon
    - Lower Feather River Steelhead
    - Lower American River Fall-run Chinook Salmon
    - Lower American River Steelhead
- Section 9E.1.2: Assumptions
  - This section provides a brief description of the assumptions for the WUA analysis for simulations of the No Action Alternative, Second Basis of Comparison, and other alternatives.
- Section 9E.2: Weighted Useable Area-Discharge Relationships
  - This section presents the WUA-discharge relationships that served as the basis for evaluating changes in habitat related to flow.
- Section 9E.3: Results
  - This section presents the WUA values generated for each water body, species, and life stage evaluated.

9E.1 Methodology and Assumptions

9E.1.1 Methodology

To compare the operational flow regime and evaluate the potential effects on habitat for anadromous species inhabiting streams, the relationships between

streamflow and habitat availability were determined for each life stage of these species in the rivers in which flows may be altered by CVP and SWP operations.

Several studies have been conducted using the models and techniques contained within the Instream Flow Incremental Methodology (IFIM) to establish these relationships in streams within the study area. The analytic variable provided by the IFIM is total habitat, in units of WUA, for each life stage (fry, juvenile, and spawning) of each evaluation species (or race as applied to Chinook Salmon). Habitat (WUA) incorporates both macro- and microhabitat features. Macrohabitat features include changes in flow, and microhabitat features include the hydraulic and structural conditions (depth, velocity, substrate, or cover) affected by flow, which define the actual living space of the organisms. The total habitat available to a species/life stage at any streamflow is the area of overlap between available microhabitat and macrohabitat conditions. Because the combination of depths, velocities, and substrates preferred by species and life stages varies, WUA values at a given flow differ substantially for the species and life stages evaluated.

WUA-flow relationships have been developed for only some of the rivers where simulated flows were available. Therefore, flow-dependent habitat availability was evaluated quantitatively only for Clear Creek and the Sacramento, Feather, and American rivers and was not reported for other rivers evaluated in this EIS. Tables of the spawning habitat-discharge relationships used in the calculations of spawning WUA for these rivers are listed in Section 9E.3. Because the WUA-flow relationships developed by the most recent IFIM studies present WUA values within particular flow ranges at variable steps, the monthly flow for a particular reach often fell between two flows for which there were WUA values. In these cases, the value was determined by linear interpolation between the available WUA values for the flows immediately below and above the target flow. When the target flow was lower than the lowermost flow for which a WUA value exists, the corresponding WUA value was determined by linear interpolation between a flow of zero and the lowermost flow for which a WUA value exists. When the target flow was higher than the highest flow for which a WUA value exists, the corresponding WUA value was determined by assuming the WUA value for the highest flow.

WUA tables are available for three segments of Clear Creek: the Upper Alluvial Segment (Whiskeytown Dam to Camp Bridge); Canyon Segment (Camp Bridge to Clear Creek Road Bridge); and Lower Alluvial Segment (Clear Creek Road Bridge to Sacramento River). Spring-run Chinook Salmon spawn in the upper two segments, fall-run Chinook Salmon spawn in the lower segment, and Steelhead/Rainbow Trout spawn in all three segments. Spring-run Chinook Salmon and Steelhead fry and juveniles rear in all three segments, while fall-run Chinook Salmon rear in the lower segment. The relationships between WUA and flow in all of these segments for each of these species and life stages are based upon the flow released below Whiskeytown Dam and are described in USFWS (2007, 2011a, 2011b, 2013). For this analysis, if the WUA values for a species and life stage were in the upper section only, the upper two segments were

combined for an upper Clear Creek total WUA value at each flow. The same approach was done for the lower segment. If the species and life stage spanned the entire Clear Creek, WUA values were combined for the three segments to provide an estimate of the total WUA available at each flow.

WUA tables are available for two segments of the Sacramento River: Keswick Dam to Battle Creek and Battle Creek to Deer Creek. Spring-run and fall-run Chinook Salmon and Steelhead spawn only in the upper segment; fry and juveniles rear in both segments. Each of these segments have multiple reaches identified and for which WUA was calculated (USFWS 2005a, 2005b, 2006). For this analysis, WUA estimates in each reach between Keswick Dam and Battle Creek were combined into an estimate of the total amount of habitat available in that river segment. Similarly, WUA estimates for reaches between Battle Creek and Deer Creek were combined into an estimate of the total amount of WUA available in that river segment.

For the American River, WUA estimates were available only for fall-run Chinook Salmon and Steelhead spawning. USFWS (2003) identified five reaches between Sailor Bar (River Mile [RM] 22.1) and Rossmoor (RM 16.6). The relationships between WUA and flow in all of these reaches was based upon the flow released below Nimbus Dam. For this analysis, WUA estimates within the five reaches were combined into an estimate of the total WUA in the American River at a given flow released from Nimbus Dam.

For the Feather River, WUA estimates are available for spring-run and fall-run Chinook Salmon and Steelhead spawning in two reaches: the low-flow channel from the fish barrier dam (RM 67) to the Thermalito Afterbay outlet (RM 59) and the lower Feather River high-flow channel from the Thermalito Afterbay outlet to Honcut Creek (RM 44). The relationship between WUA and flow in these reaches for each of these species is described in DWR (2004). The WUA-flow relationships developed by DWR (2004) are based upon the merging of IFIM data collected by DWR in 1992 and reviewed by DWR (2002), with new depth, velocity, substrate, and cover data collected along supplemental Physical Habitat Simulation System (PHABSIM) cross-section transects in 2002 and 2003. For this analysis, WUA estimates within the two reaches were kept separate, and estimates of WUA in each reach were based upon the different flows in each reach.

WUA values were calculated and presented only on a monthly time-step, and not as seasonal or annual values. WUA values based on the monthly CalSim II flows were prepared for detailed evaluation of the alternatives. Monthly WUA values are presented as the average total WUA in each river segment, for the entire 82-year simulation period and the average total WUA in each of five water year types for each alternative. Differences between the alternatives and the two bases of comparison (No Action Alternative and Second Basis of Comparison) were used to identify the effects of each alternative on habitat availability (WUA) for each species and life stage in each river. These comparisons were made only for the months in which the species and life stage were anticipated to be present in each river.

The ability to estimate WUA values is limited because of the monthly time-step of the CalSim II results. The monthly time-step is most limiting during the fall through spring seasons, when flows vary significantly on a daily basis because of hydrologic conditions. Hydrologic variability in the runoff and tributary flows cause significant variability of flows in the areas of interest for the WUA computations. During the periods of low flows, regulated flows from reservoir releases dampen the impact of daily variability of flows on WUA estimates. Monthly time-step simulation results do not capture the daily variability or change in variability between alternative operations. Nonetheless, these estimates provide an indication of the habitat differences among the alternative operational scenarios evaluated.

9E.1.2 Assumptions

Assumptions for the WUA analysis for the No Action Alternative, Second Basis of Comparison, and Alternatives 1 through 5 were developed with the surface water modeling tools and are described in Appendix 5A, Section B.

The following CalSim II model simulations were performed as the basis of evaluating the impacts of No Action Alternative, Second Basis of Comparison, and Alternatives 1 through 5:

- No Action Alternative
- Second Basis of Comparison
- Alternative 1 – for simulation purposes, considered the same as Second Basis of Comparison
- Alternative 2 – for simulation purposes, considered the same as No Action Alternative
- Alternative 3
- Alternative 4 – for simulation purposes, considered the same as Second Basis of Comparison.
- Alternative 5

Alternatives 1 and 4 modeling assumptions are the same as the Second Basis of Comparison, and Alternative 2 modeling assumptions are the same as the No Action Alternative; therefore, the assumptions for Alternatives 1, 2, and 4 are not discussed separately in this document.

Assumptions for each of these alternatives are reflected to monthly CalSim II flows that are used in the WUA analysis described in this section. The WUA area-discharge relationships described below pertain to all alternatives.

The WUA analysis starts with use of the monthly CalSim II model to project CVP and SWP water deliveries. Because this regional model uses monthly time steps to simulate requirements that change weekly or change through observations, it was determined that changes in the model of 5 percent or less were related to the uncertainties in the model processing. Therefore, reductions of 5 percent or less

in this comparative WUA analysis are considered to be not substantially different, or "similar."

9E.2 Weighted Useable Area-Discharge Relationships

The WUA-discharge relationships (WUA curves) used for the analysis are presented at the end of this appendix by river reach and species. The "total" column represents the relationship that was used to calculate the WUA for each species and life-stage. Adjustments were made to the WUA relationship by adding a minimum and a maximum value at the first and last row of each table to make the interpolation scheme function.

9E.3 Results

The results of the WUA analysis are presented in the tables listed below. The tables show monthly WUA in acres for each river reach and fish species (as described in Section 9E.1.1) with monthly exceedance probabilities and long-term and water year type averages over the 82-year CalSim II simulation period. The tables also present the incremental difference in WUA for each alternative as compared to the No Action Alternative and the Second Basis of Comparison.

The results are presented in the following tables at the end of this appendix:

- C.1. Upper Clear Creek Spring-run Spawning WUA
- C.2. Total Clear Creek Spring-run Fry Rearing WUA
- C.3. Total Clear Creek Spring-run Juvenile Rearing WUA
- C.4. Lower Clear Creek Fall-run Spawning WUA
- C.5. Lower Clear Creek Fall-run Fry Rearing WUA
- C.6. Lower Clear Creek Fall-run Juvenile Rearing WUA
- C.7. Total Clear Creek Steelhead/Rainbow Trout Spawning WUA
- C.8. Total Clear Creek Steelhead/Rainbow Trout Fry Rearing WUA
- C.9. Total Clear Creek Steelhead/Rainbow Trout Juvenile Rearing WUA
- C.10. Sacramento River Battle Creek to Deer Creek Fall-run Spawning WUA
- C.11. Sacramento River Keswick to Battle Creek Fall-run Spawning WUA
- C.12. Sacramento River Keswick to Battle Creek Fall-run Fry Rearing WUA
- C.13. Sacramento River Keswick to Battle Creek Fall-run Juvenile Rearing WUA

- C.14. Sacramento River Keswick to Battle Creek Late-Fall-run Spawning WUA
- C.15. Sacramento River Keswick to Battle Creek Late-Fall-run Fry Rearing WUA
- C.16. Sacramento River Keswick to Battle Creek Late-Fall-run Juvenile Rearing WUA
- C.17. Sacramento River Keswick to Battle Creek Winter-run Spawning WUA
- C.18. Sacramento River Keswick to Battle Creek Winter-run Fry Rearing WUA
- C.19. Sacramento River Keswick to Battle Creek Winter-run Juvenile Rearing WUA
- C.20. Sacramento River Keswick to Battle Creek Steelhead Spawning WUA
- C.21. Feather River Low Flow Channel Steelhead Spawning WUA
- C.22. Feather River below Thermalito Steelhead Spawning WUA
- C.23. Feather River Low Flow Channel Fall-run Spawning WUA
- C.24. Feather River below Thermalito Fall-run Spawning WUA
- C.25. American River below Nimbus Fall-run Spawning WUA
- C.26. American River below Nimbus Steelhead Spawning WUA

9E.4 References

DWR (California Department of Water Resources). 2002. *Phase 1: Evaluation of project effects on instream flows and fish habitat*. Draft Report, SP-F16. Oroville Facilities Relicensing FERC Project No. 2100.

_____ (California Department of Water Resources). 2004. *Phase 2 Report, Evaluation of project effects on instream flows and fish habitat*. SP-F16. Oroville Facilities Relicensing FERC Project No. 2100.

USFWS (U.S. Fish and Wildlife Service). 2003. *Comparison of PHABSIM and 2-D Modeling of habitat for steelhead and fall-run Chinook Salmon spawning in the lower American River*.

_____. 2005a. *Flow-habitat relationships for fall-run Chinook Salmon spawning in the Sacramento River between Battle Creek and Clear Creek*.

_____. 2005b. *Flow-habitat relationships for Chinook Salmon rearing in the Sacramento River between Keswick Dam and Battle Creek.*

_____. 2006. *Relationships between flow fluctuations and redd dewatering and juvenile stranding for Chinook Salmon and steelhead in the Sacramento River between Keswick Dam and Battle Creek.*

_____. 2007. *Flow-habitat relationships for spring Chinook Salmon and steelhead/Rainbow Trout spawning in Clear Creek between Whiskeytown Dam and Clear Creek Road*.

_____. 2011a. *Flow-habitat relationships for fall-run Chinook Salmon and steelhead/Rainbow Trout spawning in Clear Creek between Clear Creek Road and the Sacramento River*.

_____. 2011b. *Flow-habitat relationships for spring-run Chinook Salmon and steelhead/Rainbow Trout rearing in Clear Creek between Whiskeytown Dam and Clear Creek Road*.

_____. 2013. *Flow-habitat relationships for spring-run and fall-run Chinook Salmon and steelhead/Rainbow Trout rearing in Clear Creek between Clear Creek Road and the Sacramento River*.

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Table 9E.B.1 Clear Creek Spring-Run WUA Curves

	WUA (square feet)		
Flow (cfs)	Upper Clear Creek Spring-run Spawning	Total Clear Creek Spring-run Fry Rearing	Total Clear Creek Spring-run Juvenile Rearing
0	0	0	0
50	1,737	305,087	181,084
75	3,319	300,786	231,295
100	4,986	302,878	276,361
125	6,504	308,988	316,822
150	7,948	310,298	353,767
175	9,486	314,688	391,364
200	10,739	318,856	421,350
225	11,905	330,375	447,973
250	13,020	338,441	473,325
275	14,067	355,645	495,004
300	15,078	369,849	515,631
350	16,876	381,099	552,011
400	18,463	389,480	583,890
450	19,744	407,051	605,088
500	20,726	420,617	635,094
550	21,379	438,624	653,678
600	22,034	463,029	662,533
650	22,581	470,058	676,055
700	22,855	471,109	686,271
750	22,924	476,652	693,625
800	23,039	480,913	699,399
850	22,953	497,147	701,810
900	23,012	510,275	703,629
99,999	23,012	510,275	703,629

Table 9E.B.2 Clear Creek Fall-run WUA Curves

	WUA (square feet)		
Flow (cfs)	Lower Clear Creek Fall-run Spawning	Lower Clear Creek Fall-run Fry Rearing	Lower Clear Creek Fall-run Juvenile Rearing
0	0	0	0
50	78,145	536,166	224,915
75	107,008	528,779	248,454
100	130,194	515,513	267,634
125	151,079	501,845	283,272
150	168,950	490,718	296,863
175	185,871	478,203	308,968
200	197,705	470,453	318,200
225	206,377	463,637	325,414
250	212,410	458,051	330,224
275	216,026	454,405	334,768
300	217,880	450,992	337,862
350	217,553	444,511	338,627
400	213,538	440,975	334,869
450	207,615	438,123	315,866
500	199,662	425,804	315,769
550	191,877	418,842	304,825
600	184,133	417,735	284,289
650	176,448	410,118	273,178
700	169,132	404,258	263,294
750	162,105	400,288	253,609
800	155,008	393,976	242,998
850	148,934	390,482	234,032
900	143,371	389,928	226,215
99,999	143,371	389,928	226,215

Table 9E.B.3 Clear Creek Steelhead/Rainbow Trout WUA Curves

	WUA (square feet)		
Flow (cfs)	Total Clear Creek Steelhead/Rainbow Trout Spawning	Total Clear Creek Steelhead/Rainbow Trout Fry Rearing	Total Clear Creek Steelhead/Rainbow Trout Juvenile Rearing
0	0	0	0
50	14,700	224,356	181,084
75	22,837	222,351	231,295
100	29,787	214,949	276,361
125	36,338	211,348	316,822
150	42,328	209,184	353,767
175	48,149	206,849	391,364
200	52,420	203,238	421,350
225	55,867	208,995	447,973
250	58,528	209,322	473,325
275	60,424	212,115	495,004
300	61,871	220,851	515,631
350	63,255	228,833	552,011
400	63,412	230,063	583,890
450	62,622	241,496	605,088
500	60,877	246,000	635,094
550	58,758	251,634	653,678
600	56,675	261,221	662,533
650	54,518	268,887	676,055
700	52,169	270,618	686,271
750	49,738	271,310	693,625
800	47,369	271,035	699,399
850	45,171	274,512	701,810
900	43,337	275,489	703,629
99,999	43,337	275,489	703,629

Table 9E.B.4 Sacramento River Fall-run WUA Curves

	WUA (square feet)			
Flow (cfs)	Battle Creek to Deer Creek Fall-run Spawning	Keswick to Battle Creek Fall-run Spawning	Keswick to Battle Creek Fall-run Fry Rearing	Keswick to Battle Creek Fall-run Juvenile Rearing
0	0	0	0	0
3,250	2,432,159	1,073,679	1,871,072	728,233
3,500	2,472,408	1,089,475	1,821,873	715,103
3,750	2,517,107	1,093,650	1,830,154	701,709
4,000	2,548,379	1,089,818	1,798,254	691,339
4,250	2,537,270	1,084,494	1,750,173	688,865
4,500	2,572,156	1,074,099	1,690,021	681,467
4,750	2,617,635	1,057,966	1,617,681	668,630
5,000	2,607,065	1,036,730	1,542,592	654,220
5,250	2,619,093	1,017,272	1,478,235	640,414
5,500	2,610,395	994,119	1,419,447	627,375
6,000	2,578,633	942,777	1,328,088	604,811
6,500	2,504,604	891,555	1,279,831	582,950
7,000	2,438,632	837,998	1,235,057	556,427
7,500	2,372,848	784,594	1,164,277	532,183
8,000	2,285,308	731,498	1,120,681	507,090
9,000	2,106,590	643,378	1,091,836	464,272
10,000	1,948,099	555,487	1,092,181	428,954
11,000	1,712,607	474,731	1,085,512	403,177
12,000	1,483,279	408,952	1,101,042	379,516
13,000	1,269,818	346,840	1,118,019	370,163
14,000	1,094,316	301,374	1,142,898	358,085
15,000	952,887	269,303	1,167,580	347,450
17,000	749,112	222,822	1,220,225	361,817
19,000	630,753	185,045	1,222,740	369,470
21,000	526,365	163,408	1,264,409	362,192
23,000	462,509	141,757	1,270,854	366,577
25,000	421,614	130,345	1,282,882	372,986
27,000	382,837	132,036	1,305,362	378,114
29,000	340,721	119,187	1,295,423	361,772
31,000	298,265	103,856	1,311,020	378,338
99,999	298,265	103,856	1,311,020	378,338

Table 9E.B.5 Sacramento River Late-Fall-run WUA Curves

	WUA (square feet)		
Flow (cfs)	Keswick to Battle Creek Late-Fall-run Spawning	Keswick to Battle Creek Late-Fall-run Fry Rearing	Keswick to Battle Creek Late-Fall-run Juvenile Rearing
0	0	0	0
3,250	1,357,068	1,757,540	659,077
3,500	1,378,274	1,718,590	648,446
3,750	1,378,912	1,740,549	637,005
4,000	1,370,262	1,721,404	628,277
4,250	1,359,143	1,680,035	627,744
4,500	1,342,482	1,629,936	620,092
4,750	1,320,680	1,571,143	608,977
5,000	1,295,212	1,502,665	596,274
5,250	1,271,113	1,437,972	583,959
5,500	1,243,776	1,376,346	572,860
6,000	1,181,069	1,261,669	554,054
6,500	1,122,270	1,203,340	536,133
7,000	1,065,218	1,147,957	513,493
7,500	1,012,511	1,076,669	490,854
8,000	962,228	1,032,614	471,581
9,000	881,467	996,279	433,927
10,000	808,457	1,001,320	402,178
11,000	775,199	996,976	379,536
12,000	662,349	1,032,176	359,783
13,000	591,015	1,066,055	351,167
14,000	536,623	1,113,975	340,209
15,000	490,838	1,157,098	332,332
17,000	416,672	1,168,615	350,563
19,000	343,307	1,080,514	360,158
21,000	290,800	1,116,739	355,202
23,000	236,295	1,127,194	361,149
25,000	202,402	1,134,116	369,272
27,000	185,740	1,225,596	376,024
29,000	164,178	1,262,909	363,757
31,000	140,077	1,244,123	382,314
99,999	140,077	1,244,123	382,314

Table 9E.B.6 Sacramento River Winter-run WUA Curves

	WUA (square feet)		
Flow (cfs)	Keswick to Battle Creek Winter-run Spawning	Keswick to Battle Creek Winter-run Fry Rearing	Keswick to Battle Creek Winter-run Juvenile Rearing
0	0	0	0
3,250	1,125,187	782,341	334,216
3,500	1,177,489	778,889	335,588
3,750	1,218,972	791,817	333,961
4,000	1,254,492	797,410	333,396
4,250	1,289,068	799,911	333,004
4,500	1,320,041	798,463	333,189
4,750	1,347,509	790,977	330,335
5,000	1,370,744	775,409	325,718
5,250	1,384,194	764,319	321,756
5,500	1,398,590	755,564	319,393
6,000	1,410,564	715,517	318,494
6,500	1,415,012	727,585	318,071
7,000	1,406,770	716,784	314,041
7,500	1,389,451	690,283	311,007
8,000	1,367,448	672,429	308,046
9,000	1,321,815	644,819	296,094
10,000	1,283,522	666,210	283,771
11,000	1,198,399	701,228	277,165
12,000	1,103,552	753,835	275,603
13,000	1,004,918	797,594	270,537
14,000	915,365	869,871	268,431
15,000	825,757	948,339	274,828
17,000	684,413	1,001,423	314,963
19,000	565,235	917,104	344,970
21,000	475,366	918,518	343,611
23,000	406,166	935,828	352,009
25,000	353,236	968,252	364,822
27,000	327,296	1,073,445	379,054
29,000	312,014	1,164,262	382,682
31,000	302,328	1,168,539	408,157
99,999	302,328	1,168,539	408,157

Table 9E.B.7 Sacramento River Steelhead/Rainbow Trout WUA Curves

	WUA (square feet)
	Keswick to Battle Creek
Flow (cfs)	Steelhead Spawning
0	0
3,250	271,412
3,500	278,641
3,750	281,518
4,000	281,229
4,250	280,488
4,500	282,045
4,750	282,780
5,000	283,534
5,250	285,728
5,500	288,401
6,000	289,884
6,500	289,103
7,000	284,623
7,500	276,950
8,000	268,176
9,000	251,698
10,000	232,933
11,000	210,724
12,000	189,312
13,000	167,383
14,000	146,119
15,000	126,295
17,000	93,806
19,000	70,820
21,000	58,872
23,000	46,682
25,000	44,177
27,000	41,301
29,000	35,380
31,000	32,295
99,999	32,295

Table 9E.B.8 Lower Feather River Fall-Run WUA Curves

	WUA (square feet)	
Flow (cfs)	Low Flow Channel Fall-run Spawning	Below Thermalito Fall-run Fry Rearing
0	0	0
150	3,460,980	20,780,100
200	5,903,400	26,322,670
250	8,565,240	30,204,290
300	11,197,250	32,691,770
350	13,691,620	33,679,540
400	15,979,160	34,378,390
450	18,011,420	34,878,890
500	19,778,950	35,137,160
550	21,271,740	35,198,090
600	22,472,430	35,058,990
650	23,416,740	34,748,930
700	24,090,230	34,278,830
750	24,525,810	32,571,050
800	24,736,140	30,408,820
850	24,741,090	28,051,660
900	24,567,120	25,750,770
950	24,248,470	23,704,410
1,000	23,821,070	21,947,580
1,100	22,655,140	20,471,850
1,200	21,237,340	19,214,760
1,300	19,662,700	18,140,940
1,400	18,012,660	17,155,790
1,500	16,416,190	16,256,150
1,600	14,861,290	15,441,510
1,800	12,004,900	14,676,420
2,000	9,588,350	13,960,600
2,250	7,178,580	13,282,640
2,500	5,454,150	12,622,640
2,750	4,264,050	11,366,810
3,000	3,523,410	10,224,170
99,999	3,523,410	10,224,170

Table 9E.B.9 Lower Feather River Steelhead WUA Curves

	WUA (square feet)	
Flow (cfs)	Low Flow Channel Steelhead Spawning	Below Thermalito Steelhead Fry Rearing
0	0	0
150	757,810	10,852,180
200	846,400	12,808,710
250	884,980	12,663,550
300	919,660	11,745,270
350	971,890	11,191,230
400	1,031,790	10,678,780
450	1,075,030	10,170,320
500	1,092,780	9,623,500
550	1,084,020	9,023,130
600	1,067,460	8,424,520
650	1,044,300	7,847,810
700	1,031,830	7,313,430
750	1,013,030	6,209,280
800	989,930	5,428,120
850	966,920	4,806,330
900	939,150	4,264,650
950	897,040	3,780,190
1,000	841,560	3,445,820
1,100	718,450	3,251,770
1,200	591,180	3,142,870
1,300	474,000	3,037,770
1,400	378,050	2,936,170
1,500	300,270	2,788,390
1,600	238,510	2,636,030
1,800	154,680	2,464,440
2,000	100,720	2,256,520
2,250	124,360	2,051,450
2,500	171,570	1,851,590
2,750	215,650	1,523,520
3,000	237,410	1,243,430
99,999	237,410	1,243,430

Table 9E.B.10 Lower American River Fall-run WUA Curves

	WUA (square feet)
Flow (cfs)	Sailor Bar to Rossmoor Fall-run Spawning
0	0
1,000	761,361
1,200	817,031
1,400	853,047
1,600	871,959
1,800	877,804
2,000	881,528
2,200	881,905
2,400	866,405
2,600	840,949
2,800	810,552
3,000	779,982
3,400	745,172
3,800	672,903
4,200	607,384
4,600	542,402
5,000	494,912
5,400	455,893
5,800	431,125
6,200	395,906
6,600	369,760
7,000	346,898
7,400	324,186
7,800	305,059
8,200	289,010
8,600	272,509
9,000	258,849
9,400	249,130
9,800	245,933
10,400	225,180
11,000	210,972
99,999	210,972

Table 9E.B.11 Lower American River Steelhead WUA Curves

	WUA (square feet)
	Sailor Bar to Rossmoor
Flow (cfs)	Fall-run Spawning
0	0
1,000	244,184
1,200	259,200
1,400	271,081
1,600	275,989
1,800	282,068
2,000	285,223
2,200	285,665
2,400	280,536
2,600	273,113
2,800	264,182
3,000	257,478
3,400	242,542
3,800	223,125
4,200	204,398
4,600	186,065
5,000	173,712
5,400	163,188
5,800	149,814
6,200	135,625
6,600	126,901
7,000	118,107
7,400	108,736
7,800	101,952
8,200	95,945
8,600	89,863
9,000	85,313
9,400	80,198
9,800	82,740
10,400	75,103
11,000	70,711
99,999	70,711

C.1. Upper Clear Creek Spring-run Spawning WUA

Table C-1-1. Upper Clear Creek Spring-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)
Statistic	Sep
Probability of Exceedance[a]	
10%	7,948
20%	7,948
30%	7,948
40%	7,948
50%	7,948
60%	7,948
70%	7,948
80%	7,948
90%	7,948
Long Term	
Full Simulation Period[b]	7,797
Water Year Types[c]	
Wet (32%)	7,948
Above Normal (16%)	7,948
Below Normal (13%)	7,948
Dry (24%)	7,948
Critical (15%)	6,913

Alternative 1

	Monthly WUA (Feet2)
Statistic	Sep
Probability of Exceedance[a]	
10%	7,948
20%	7,948
30%	7,948
40%	7,948
50%	7,948
60%	7,948
70%	7,948
80%	7,948
90%	7,948
Long Term	
Full Simulation Period[b]	7,797
Water Year Types[c]	
Wet (32%)	7,948
Above Normal (16%)	7,948
Below Normal (13%)	7,948
Dry (24%)	7,948
Critical (15%)	6,913

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)
Statistic	Sep
Probability of Exceedance[a]	
10%	0
20%	0
30%	0
40%	0
50%	0
60%	0
70%	0
80%	0
90%	0
Long Term	
Full Simulation Period[b]	0
Water Year Types[c]	
Wet (32%)	0
Above Normal (16%)	0
Below Normal (13%)	0
Dry (24%)	0
Critical (15%)	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-1-2. Upper Clear Creek Spring-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)
Statistic	Sep
Probability of Exceedance[a]	
10%	7,948
20%	7,948
30%	7,948
40%	7,948
50%	7,948
60%	7,948
70%	7,948
80%	7,948
90%	7,948
Long Term	
Full Simulation Period[b]	7,797
Water Year Types[c]	
Wet (32%)	7,948
Above Normal (16%)	7,948
Below Normal (13%)	7,948
Dry (24%)	7,948
Critical (15%)	6,913

Alternative 3

	Monthly WUA (Feet2)
Statistic	Sep
Probability of Exceedance[a]	
10%	7,948
20%	7,948
30%	7,948
40%	7,948
50%	7,948
60%	7,948
70%	7,948
80%	7,948
90%	7,948
Long Term	
Full Simulation Period[b]	7,797
Water Year Types[c]	
Wet (32%)	7,948
Above Normal (16%)	7,948
Below Normal (13%)	7,948
Dry (24%)	7,948
Critical (15%)	6,913

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)
Statistic	Sep
Probability of Exceedance[a]	
10%	0
20%	0
30%	0
40%	0
50%	0
60%	0
70%	0
80%	0
90%	0
Long Term	
Full Simulation Period[b]	0
Water Year Types[c]	
Wet (32%)	0
Above Normal (16%)	0
Below Normal (13%)	0
Dry (24%)	0
Critical (15%)	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-1-3. Upper Clear Creek Spring-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)
Statistic	Sep
Probability of Exceedance[a]	
10%	7,948
20%	7,948
30%	7,948
40%	7,948
50%	7,948
60%	7,948
70%	7,948
80%	7,948
90%	7,948
Long Term	
Full Simulation Period[b]	7,797
Water Year Types[c]	
Wet (32%)	7,948
Above Normal (16%)	7,948
Below Normal (13%)	7,948
Dry (24%)	7,948
Critical (15%)	6,913

Alternative 5

	Monthly WUA (Feet2)
Statistic	Sep
Probability of Exceedance[a]	
10%	7,948
20%	7,948
30%	7,948
40%	7,948
50%	7,948
60%	7,948
70%	7,948
80%	7,948
90%	7,948
Long Term	
Full Simulation Period[b]	7,797
Water Year Types[c]	
Wet (32%)	7,948
Above Normal (16%)	7,948
Below Normal (13%)	7,948
Dry (24%)	7,948
Critical (15%)	6,913

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)
Statistic	Sep
Probability of Exceedance[a]	
10%	0
20%	0
30%	0
40%	0
50%	0
60%	0
70%	0
80%	0
90%	0
Long Term	
Full Simulation Period[b]	0
Water Year Types[c]	
Wet (32%)	0
Above Normal (16%)	0
Below Normal (13%)	0
Dry (24%)	0
Critical (15%)	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-1-4. Upper Clear Creek Spring-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)
Statistic	Sep
Probability of Exceedance[a]	
10%	7,948
20%	7,948
30%	7,948
40%	7,948
50%	7,948
60%	7,948
70%	7,948
80%	7,948
90%	7,948
Long Term	
Full Simulation Period[b]	7,797
Water Year Types[c]	
Wet (32%)	7,948
Above Normal (16%)	7,948
Below Normal (13%)	7,948
Dry (24%)	7,948
Critical (15%)	6,913

No Action Alternative

	Monthly WUA (Feet2)
Statistic	Sep
Probability of Exceedance[a]	
10%	7,948
20%	7,948
30%	7,948
40%	7,948
50%	7,948
60%	7,948
70%	7,948
80%	7,948
90%	7,948
Long Term	
Full Simulation Period[b]	7,797
Water Year Types[c]	
Wet (32%)	7,948
Above Normal (16%)	7,948
Below Normal (13%)	7,948
Dry (24%)	7,948
Critical (15%)	6,913

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)
Statistic	Sep
Probability of Exceedance[a]	
10%	0
20%	0
30%	0
40%	0
50%	0
60%	0
70%	0
80%	0
90%	0
Long Term	
Full Simulation Period[b]	0
Water Year Types[c]	
Wet (32%)	0
Above Normal (16%)	0
Below Normal (13%)	0
Dry (24%)	0
Critical (15%)	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-1-5. Upper Clear Creek Spring-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)
Statistic	Sep
Probability of Exceedance[a]	
10%	7,948
20%	7,948
30%	7,948
40%	7,948
50%	7,948
60%	7,948
70%	7,948
80%	7,948
90%	7,948
Long Term	
Full Simulation Period[b]	7,797
Water Year Types[c]	
Wet (32%)	7,948
Above Normal (16%)	7,948
Below Normal (13%)	7,948
Dry (24%)	7,948
Critical (15%)	6,913

Alternative 3

	Monthly WUA (Feet2)
Statistic	Sep
Probability of Exceedance[a]	
10%	7,948
20%	7,948
30%	7,948
40%	7,948
50%	7,948
60%	7,948
70%	7,948
80%	7,948
90%	7,948
Long Term	
Full Simulation Period[b]	7,797
Water Year Types[c]	
Wet (32%)	7,948
Above Normal (16%)	7,948
Below Normal (13%)	7,948
Dry (24%)	7,948
Critical (15%)	6,913

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)
Statistic	Sep
Probability of Exceedance[a]	
10%	0
20%	0
30%	0
40%	0
50%	0
60%	0
70%	0
80%	0
90%	0
Long Term	
Full Simulation Period[b]	0
Water Year Types[c]	
Wet (32%)	0
Above Normal (16%)	0
Below Normal (13%)	0
Dry (24%)	0
Critical (15%)	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-1-6. Upper Clear Creek Spring-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)
Statistic	Sep
Probability of Exceedance[a]	
10%	7,948
20%	7,948
30%	7,948
40%	7,948
50%	7,948
60%	7,948
70%	7,948
80%	7,948
90%	7,948
Long Term	
Full Simulation Period[b]	7,797
Water Year Types[c]	
Wet (32%)	7,948
Above Normal (16%)	7,948
Below Normal (13%)	7,948
Dry (24%)	7,948
Critical (15%)	6,913

Alternative 5

	Monthly WUA (Feet2)
Statistic	Sep
Probability of Exceedance[a]	
10%	7,948
20%	7,948
30%	7,948
40%	7,948
50%	7,948
60%	7,948
70%	7,948
80%	7,948
90%	7,948
Long Term	
Full Simulation Period[b]	7,797
Water Year Types[c]	
Wet (32%)	7,948
Above Normal (16%)	7,948
Below Normal (13%)	7,948
Dry (24%)	7,948
Critical (15%)	6,913

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)
Statistic	Sep
Probability of Exceedance[a]	
10%	0
20%	0
30%	0
40%	0
50%	0
60%	0
70%	0
80%	0
90%	0
Long Term	
Full Simulation Period[b]	0
Water Year Types[c]	
Wet (32%)	0
Above Normal (16%)	0
Below Normal (13%)	0
Dry (24%)	0
Critical (15%)	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.2. Total Clear Creek Spring-run Fry Rearing WUA

Table C-2-1. Total Clear Creek Spring-run Fry Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]					
10%	318,856	318,856	318,856	318,856	318,856
20%	318,856	318,856	318,856	318,856	318,856
30%	318,856	318,856	318,856	318,856	318,856
40%	318,856	318,856	318,856	318,856	318,856
50%	318,856	318,856	318,856	318,856	318,856
60%	318,856	318,856	318,856	318,856	318,856
70%	318,856	318,856	318,856	318,856	318,856
80%	318,856	318,856	318,856	318,856	318,856
90%	310,298	310,298	310,298	310,298	310,298
Long Term					
Full Simulation Period[b]	316,885	317,096	321,973	322,078	319,743
Water Year Types[c]					
Wet (32%)	318,856	318,856	333,581	333,581	326,218
Above Normal (16%)	316,216	316,881	317,539	318,198	318,198
Below Normal (13%)	318,078	318,078	318,078	318,078	318,078
Dry (24%)	316,284	316,717	317,144	317,144	317,144
Critical (15%)	313,246	313,246	313,246	313,246	313,246

Alternative 1

	Monthly WUA (Feet2)				
Statistic	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]					
10%	318,856	318,856	318,856	318,856	318,856
20%	318,856	318,856	318,856	318,856	318,856
30%	318,856	318,856	318,856	318,856	318,856
40%	318,856	318,856	318,856	318,856	318,856
50%	318,856	318,856	318,856	318,856	318,856
60%	318,856	318,856	318,856	318,856	318,856
70%	318,856	318,856	318,856	318,856	318,856
80%	318,856	318,856	318,856	318,856	318,856
90%	310,298	310,298	310,298	310,298	310,298
Long Term					
Full Simulation Period[b]	316,885	317,096	321,973	322,078	319,743
Water Year Types[c]					
Wet (32%)	318,856	318,856	333,581	333,581	326,218
Above Normal (16%)	316,216	316,881	317,539	318,198	318,198
Below Normal (13%)	318,078	318,078	318,078	318,078	318,078
Dry (24%)	316,284	316,717	317,144	317,144	317,144
Critical (15%)	313,246	313,246	313,246	313,246	313,246

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-2-2. Total Clear Creek Spring-run Fry Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]					
10%	318,856	318,856	318,856	318,856	318,856
20%	318,856	318,856	318,856	318,856	318,856
30%	318,856	318,856	318,856	318,856	318,856
40%	318,856	318,856	318,856	318,856	318,856
50%	318,856	318,856	318,856	318,856	318,856
60%	318,856	318,856	318,856	318,856	318,856
70%	318,856	318,856	318,856	318,856	318,856
80%	318,856	318,856	318,856	318,856	318,856
90%	310,298	310,298	310,298	310,298	310,298
Long Term					
Full Simulation Period[b]	316,885	317,096	321,973	322,078	319,743
Water Year Types[c]					
Wet (32%)	318,856	318,856	333,581	333,581	326,218
Above Normal (16%)	316,216	316,881	317,539	318,198	318,198
Below Normal (13%)	318,078	318,078	318,078	318,078	318,078
Dry (24%)	316,284	316,717	317,144	317,144	317,144
Critical (15%)	313,246	313,246	313,246	313,246	313,246

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]					
10%	318,856	318,856	318,856	318,856	318,856
20%	318,856	318,856	318,856	318,856	318,856
30%	318,856	318,856	318,856	318,856	318,856
40%	318,856	318,856	318,856	318,856	318,856
50%	318,856	318,856	318,856	318,856	318,856
60%	318,856	318,856	318,856	318,856	318,856
70%	318,856	318,856	318,856	318,856	318,856
80%	318,856	318,856	318,856	318,856	318,856
90%	310,298	310,298	310,298	310,298	310,298
Long Term					
Full Simulation Period[b]	316,885	317,096	321,973	322,078	319,743
Water Year Types[c]					
Wet (32%)	318,856	318,856	333,581	333,581	326,218
Above Normal (16%)	316,216	316,881	317,539	318,198	318,198
Below Normal (13%)	318,078	318,078	318,078	318,078	318,078
Dry (24%)	316,284	316,717	317,144	317,144	317,144
Critical (15%)	313,246	313,246	313,246	313,246	313,246

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-2-3. Total Clear Creek Spring-run Fry Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]					
10%	318,856	318,856	318,856	318,856	318,856
20%	318,856	318,856	318,856	318,856	318,856
30%	318,856	318,856	318,856	318,856	318,856
40%	318,856	318,856	318,856	318,856	318,856
50%	318,856	318,856	318,856	318,856	318,856
60%	318,856	318,856	318,856	318,856	318,856
70%	318,856	318,856	318,856	318,856	318,856
80%	318,856	318,856	318,856	318,856	318,856
90%	310,298	310,298	310,298	310,298	310,298
Long Term					
Full Simulation Period[b]	316,885	317,096	321,973	322,078	319,743
Water Year Types[c]					
Wet (32%)	318,856	318,856	333,581	333,581	326,218
Above Normal (16%)	316,216	316,881	317,539	318,198	318,198
Below Normal (13%)	318,078	318,078	318,078	318,078	318,078
Dry (24%)	316,284	316,717	317,144	317,144	317,144
Critical (15%)	313,246	313,246	313,246	313,246	313,246

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]					
10%	318,856	318,856	318,856	318,856	318,856
20%	318,856	318,856	318,856	318,856	318,856
30%	318,856	318,856	318,856	318,856	318,856
40%	318,856	318,856	318,856	318,856	318,856
50%	318,856	318,856	318,856	318,856	318,856
60%	318,856	318,856	318,856	318,856	318,856
70%	318,856	318,856	318,856	318,856	318,856
80%	318,856	318,856	318,856	318,856	318,856
90%	310,298	310,298	310,298	310,298	310,298
Long Term					
Full Simulation Period[b]	316,885	317,096	321,973	322,078	319,743
Water Year Types[c]					
Wet (32%)	318,856	318,856	333,581	333,581	326,218
Above Normal (16%)	316,216	316,881	317,539	318,198	318,198
Below Normal (13%)	318,078	318,078	318,078	318,078	318,078
Dry (24%)	316,284	316,717	317,144	317,144	317,144
Critical (15%)	313,246	313,246	313,246	313,246	313,246

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-2-4. Total Clear Creek Spring-run Fry Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]					
10%	318,856	318,856	318,856	318,856	318,856
20%	318,856	318,856	318,856	318,856	318,856
30%	318,856	318,856	318,856	318,856	318,856
40%	318,856	318,856	318,856	318,856	318,856
50%	318,856	318,856	318,856	318,856	318,856
60%	318,856	318,856	318,856	318,856	318,856
70%	318,856	318,856	318,856	318,856	318,856
80%	318,856	318,856	318,856	318,856	318,856
90%	310,298	310,298	310,298	310,298	310,298
Long Term					
Full Simulation Period[b]	316,885	317,096	321,973	322,078	319,743
Water Year Types[c]					
Wet (32%)	318,856	318,856	333,581	333,581	326,218
Above Normal (16%)	316,216	316,881	317,539	318,198	318,198
Below Normal (13%)	318,078	318,078	318,078	318,078	318,078
Dry (24%)	316,284	316,717	317,144	317,144	317,144
Critical (15%)	313,246	313,246	313,246	313,246	313,246

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]					
10%	318,856	318,856	318,856	318,856	318,856
20%	318,856	318,856	318,856	318,856	318,856
30%	318,856	318,856	318,856	318,856	318,856
40%	318,856	318,856	318,856	318,856	318,856
50%	318,856	318,856	318,856	318,856	318,856
60%	318,856	318,856	318,856	318,856	318,856
70%	318,856	318,856	318,856	318,856	318,856
80%	318,856	318,856	318,856	318,856	318,856
90%	310,298	310,298	310,298	310,298	310,298
Long Term					
Full Simulation Period[b]	316,885	317,096	321,973	322,078	319,743
Water Year Types[c]					
Wet (32%)	318,856	318,856	333,581	333,581	326,218
Above Normal (16%)	316,216	316,881	317,539	318,198	318,198
Below Normal (13%)	318,078	318,078	318,078	318,078	318,078
Dry (24%)	316,284	316,717	317,144	317,144	317,144
Critical (15%)	313,246	313,246	313,246	313,246	313,246

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-2-5. Total Clear Creek Spring-run Fry Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]					
10%	318,856	318,856	318,856	318,856	318,856
20%	318,856	318,856	318,856	318,856	318,856
30%	318,856	318,856	318,856	318,856	318,856
40%	318,856	318,856	318,856	318,856	318,856
50%	318,856	318,856	318,856	318,856	318,856
60%	318,856	318,856	318,856	318,856	318,856
70%	318,856	318,856	318,856	318,856	318,856
80%	318,856	318,856	318,856	318,856	318,856
90%	310,298	310,298	310,298	310,298	310,298
Long Term					
Full Simulation Period[b]	316,885	317,096	321,973	322,078	319,743
Water Year Types[c]					
Wet (32%)	318,856	318,856	333,581	333,581	326,218
Above Normal (16%)	316,216	316,881	317,539	318,198	318,198
Below Normal (13%)	318,078	318,078	318,078	318,078	318,078
Dry (24%)	316,284	316,717	317,144	317,144	317,144
Critical (15%)	313,246	313,246	313,246	313,246	313,246

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]					
10%	318,856	318,856	318,856	318,856	318,856
20%	318,856	318,856	318,856	318,856	318,856
30%	318,856	318,856	318,856	318,856	318,856
40%	318,856	318,856	318,856	318,856	318,856
50%	318,856	318,856	318,856	318,856	318,856
60%	318,856	318,856	318,856	318,856	318,856
70%	318,856	318,856	318,856	318,856	318,856
80%	318,856	318,856	318,856	318,856	318,856
90%	310,298	310,298	310,298	310,298	310,298
Long Term					
Full Simulation Period[b]	316,885	317,096	321,973	322,078	319,743
Water Year Types[c]					
Wet (32%)	318,856	318,856	333,581	333,581	326,218
Above Normal (16%)	316,216	316,881	317,539	318,198	318,198
Below Normal (13%)	318,078	318,078	318,078	318,078	318,078
Dry (24%)	316,284	316,717	317,144	317,144	317,144
Critical (15%)	313,246	313,246	313,246	313,246	313,246

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-2-6. Total Clear Creek Spring-run Fry Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]					
10%	318,856	318,856	318,856	318,856	318,856
20%	318,856	318,856	318,856	318,856	318,856
30%	318,856	318,856	318,856	318,856	318,856
40%	318,856	318,856	318,856	318,856	318,856
50%	318,856	318,856	318,856	318,856	318,856
60%	318,856	318,856	318,856	318,856	318,856
70%	318,856	318,856	318,856	318,856	318,856
80%	318,856	318,856	318,856	318,856	318,856
90%	310,298	310,298	310,298	310,298	310,298
Long Term					
Full Simulation Period[b]	316,885	317,096	321,973	322,078	319,743
Water Year Types[c]					
Wet (32%)	318,856	318,856	333,581	333,581	326,218
Above Normal (16%)	316,216	316,881	317,539	318,198	318,198
Below Normal (13%)	318,078	318,078	318,078	318,078	318,078
Dry (24%)	316,284	316,717	317,144	317,144	317,144
Critical (15%)	313,246	313,246	313,246	313,246	313,246

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]					
10%	318,856	318,856	318,856	318,856	318,856
20%	318,856	318,856	318,856	318,856	318,856
30%	318,856	318,856	318,856	318,856	318,856
40%	318,856	318,856	318,856	318,856	318,856
50%	318,856	318,856	318,856	318,856	318,856
60%	318,856	318,856	318,856	318,856	318,856
70%	318,856	318,856	318,856	318,856	318,856
80%	318,856	318,856	318,856	318,856	318,856
90%	310,298	310,298	310,298	310,298	310,298
Long Term					
Full Simulation Period[b]	316,885	317,096	321,973	322,078	319,743
Water Year Types[c]					
Wet (32%)	318,856	318,856	333,581	333,581	326,218
Above Normal (16%)	316,216	316,881	317,539	318,198	318,198
Below Normal (13%)	318,078	318,078	318,078	318,078	318,078
Dry (24%)	316,284	316,717	317,144	317,144	317,144
Critical (15%)	313,246	313,246	313,246	313,246	313,246

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.3 Total Clear Creek Spring-run Juvenile Rearing WUA

Table C-3-1. Total Clear Creek Spring-run Juvenile Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	421,350	497,000	421,350	249,321	249,321
20%	421,350	497,000	421,350	249,321	249,321
30%	421,350	497,000	421,350	249,321	249,321
40%	421,350	497,000	421,350	249,321	249,321
50%	421,350	497,000	421,350	249,321	249,321
60%	421,350	497,000	421,350	249,321	249,321
70%	421,350	497,000	421,350	249,321	249,321
80%	421,350	497,000	353,767	249,321	249,321
90%	353,767	460,240	353,767	249,321	249,321
Long Term					
Full Simulation Period[b]	409,692	484,633	394,677	249,321	249,321
Water Year Types[c]					
Wet (32%)	421,350	497,000	421,350	249,321	249,321
Above Normal (16%)	416,151	497,000	421,350	249,321	249,321
Below Normal (13%)	415,206	493,658	409,062	249,321	249,321
Dry (24%)	407,833	487,810	397,696	249,321	249,321
Critical (15%)	375,476	430,869	289,769	249,321	249,321

Alternative 1

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	421,350	421,350	421,350	249,321	249,321
20%	421,350	421,350	421,350	249,321	249,321
30%	421,350	421,350	421,350	249,321	249,321
40%	421,350	421,350	421,350	249,321	249,321
50%	421,350	421,350	421,350	249,321	249,321
60%	421,350	421,350	421,350	249,321	249,321
70%	421,350	421,350	421,350	249,321	249,321
80%	421,350	421,350	353,767	249,321	249,321
90%	353,767	353,767	353,767	249,321	249,321
Long Term					
Full Simulation Period[b]	409,692	410,516	394,677	249,321	249,321
Water Year Types[c]					
Wet (32%)	421,350	421,350	421,350	249,321	249,321
Above Normal (16%)	416,151	421,350	421,350	249,321	249,321
Below Normal (13%)	415,206	415,206	409,062	249,321	249,321
Dry (24%)	407,833	407,833	397,696	249,321	249,321
Critical (15%)	375,476	375,476	289,769	249,321	249,321

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	0	-75,650	0	0	0
20%	0	-75,650	0	0	0
30%	0	-75,650	0	0	0
40%	0	-75,650	0	0	0
50%	0	-75,650	0	0	0
60%	0	-75,650	0	0	0
70%	0	-75,650	0	0	0
80%	0	-75,650	0	0	0
90%	0	-106,473	0	0	0
Long Term					
Full Simulation Period[b]	0	-74,117	0	0	0
Water Year Types[c]					
Wet (32%)	0	-75,650	0	0	0
Above Normal (16%)	0	-75,650	0	0	0
Below Normal (13%)	0	-78,452	0	0	0
Dry (24%)	0	-79,977	0	0	0
Critical (15%)	0	-55,393	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-3-2. Total Clear Creek Spring-run Juvenile Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	421,350	497,000	421,350	249,321	249,321
20%	421,350	497,000	421,350	249,321	249,321
30%	421,350	497,000	421,350	249,321	249,321
40%	421,350	497,000	421,350	249,321	249,321
50%	421,350	497,000	421,350	249,321	249,321
60%	421,350	497,000	421,350	249,321	249,321
70%	421,350	497,000	421,350	249,321	249,321
80%	421,350	497,000	353,767	249,321	249,321
90%	353,767	460,240	353,767	249,321	249,321
Long Term					
Full Simulation Period[b]	409,692	484,633	394,677	249,321	249,321
Water Year Types[c]					
Wet (32%)	421,350	497,000	421,350	249,321	249,321
Above Normal (16%)	416,151	497,000	421,350	249,321	249,321
Below Normal (13%)	415,206	493,658	409,062	249,321	249,321
Dry (24%)	407,833	487,810	397,696	249,321	249,321
Critical (15%)	375,476	430,869	289,769	249,321	249,321

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	421,350	421,350	421,350	249,321	249,321
20%	421,350	421,350	421,350	249,321	249,321
30%	421,350	421,350	421,350	249,321	249,321
40%	421,350	421,350	421,350	249,321	249,321
50%	421,350	421,350	421,350	249,321	249,321
60%	421,350	421,350	421,350	249,321	249,321
70%	421,350	421,350	421,350	249,321	249,321
80%	421,350	421,350	353,767	249,321	249,321
90%	353,767	353,767	353,767	249,321	249,321
Long Term					
Full Simulation Period[b]	409,692	410,516	394,677	249,321	249,321
Water Year Types[c]					
Wet (32%)	421,350	421,350	421,350	249,321	249,321
Above Normal (16%)	416,151	421,350	421,350	249,321	249,321
Below Normal (13%)	415,206	415,206	409,062	249,321	249,321
Dry (24%)	407,833	407,833	397,696	249,321	249,321
Critical (15%)	375,476	375,476	289,769	249,321	249,321

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	0	-75,650	0	0	0
20%	0	-75,650	0	0	0
30%	0	-75,650	0	0	0
40%	0	-75,650	0	0	0
50%	0	-75,650	0	0	0
60%	0	-75,650	0	0	0
70%	0	-75,650	0	0	0
80%	0	-75,650	0	0	0
90%	0	-106,473	0	0	0
Long Term					
Full Simulation Period[b]	0	-74,117	0	0	0
Water Year Types[c]					
Wet (32%)	0	-75,650	0	0	0
Above Normal (16%)	0	-75,650	0	0	0
Below Normal (13%)	0	-78,452	0	0	0
Dry (24%)	0	-79,977	0	0	0
Critical (15%)	0	-55,393	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-3-3. Total Clear Creek Spring-run Juvenile Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	421,350	497,000	421,350	249,321	249,321
20%	421,350	497,000	421,350	249,321	249,321
30%	421,350	497,000	421,350	249,321	249,321
40%	421,350	497,000	421,350	249,321	249,321
50%	421,350	497,000	421,350	249,321	249,321
60%	421,350	497,000	421,350	249,321	249,321
70%	421,350	497,000	421,350	249,321	249,321
80%	421,350	497,000	353,767	249,321	249,321
90%	353,767	460,240	353,767	249,321	249,321
Long Term					
Full Simulation Period[b]	409,692	484,633	394,677	249,321	249,321
Water Year Types[c]					
Wet (32%)	421,350	497,000	421,350	249,321	249,321
Above Normal (16%)	416,151	497,000	421,350	249,321	249,321
Below Normal (13%)	415,206	493,658	409,062	249,321	249,321
Dry (24%)	407,833	487,810	397,696	249,321	249,321
Critical (15%)	375,476	430,869	289,769	249,321	249,321

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	421,350	497,000	421,350	249,321	249,321
20%	421,350	497,000	421,350	249,321	249,321
30%	421,350	497,000	421,350	249,321	249,321
40%	421,350	497,000	421,350	249,321	249,321
50%	421,350	497,000	421,350	249,321	249,321
60%	421,350	497,000	421,350	249,321	249,321
70%	421,350	497,000	421,350	249,321	249,321
80%	421,350	497,000	353,767	249,321	249,321
90%	353,767	460,240	353,767	249,321	249,321
Long Term					
Full Simulation Period[b]	409,692	484,633	394,677	249,321	249,354
Water Year Types[c]					
Wet (32%)	421,350	497,000	421,350	249,321	249,321
Above Normal (16%)	416,151	497,000	421,350	249,321	249,321
Below Normal (13%)	415,206	493,658	409,062	249,321	249,321
Dry (24%)	407,833	487,810	397,696	249,321	249,321
Critical (15%)	375,476	430,869	289,769	249,321	249,542

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	32
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	221

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-3-4. Total Clear Creek Spring-run Juvenile Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	421,350	421,350	421,350	249,321	249,321
20%	421,350	421,350	421,350	249,321	249,321
30%	421,350	421,350	421,350	249,321	249,321
40%	421,350	421,350	421,350	249,321	249,321
50%	421,350	421,350	421,350	249,321	249,321
60%	421,350	421,350	421,350	249,321	249,321
70%	421,350	421,350	421,350	249,321	249,321
80%	421,350	421,350	353,767	249,321	249,321
90%	353,767	353,767	353,767	249,321	249,321
Long Term					
Full Simulation Period[b]	409,692	410,516	394,677	249,321	249,321
Water Year Types[c]					
Wet (32%)	421,350	421,350	421,350	249,321	249,321
Above Normal (16%)	416,151	421,350	421,350	249,321	249,321
Below Normal (13%)	415,206	415,206	409,062	249,321	249,321
Dry (24%)	407,833	407,833	397,696	249,321	249,321
Critical (15%)	375,476	375,476	289,769	249,321	249,321

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	421,350	497,000	421,350	249,321	249,321
20%	421,350	497,000	421,350	249,321	249,321
30%	421,350	497,000	421,350	249,321	249,321
40%	421,350	497,000	421,350	249,321	249,321
50%	421,350	497,000	421,350	249,321	249,321
60%	421,350	497,000	421,350	249,321	249,321
70%	421,350	497,000	421,350	249,321	249,321
80%	421,350	497,000	353,767	249,321	249,321
90%	353,767	460,240	353,767	249,321	249,321
Long Term					
Full Simulation Period[b]	409,692	484,633	394,677	249,321	249,321
Water Year Types[c]					
Wet (32%)	421,350	497,000	421,350	249,321	249,321
Above Normal (16%)	416,151	497,000	421,350	249,321	249,321
Below Normal (13%)	415,206	493,658	409,062	249,321	249,321
Dry (24%)	407,833	487,810	397,696	249,321	249,321
Critical (15%)	375,476	430,869	289,769	249,321	249,321

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	0	75,650	0	0	0
20%	0	75,650	0	0	0
30%	0	75,650	0	0	0
40%	0	75,650	0	0	0
50%	0	75,650	0	0	0
60%	0	75,650	0	0	0
70%	0	75,650	0	0	0
80%	0	75,650	0	0	0
90%	0	106,473	0	0	0
Long Term					
Full Simulation Period[b]	0	74,117	0	0	0
Water Year Types[c]					
Wet (32%)	0	75,650	0	0	0
Above Normal (16%)	0	75,650	0	0	0
Below Normal (13%)	0	78,452	0	0	0
Dry (24%)	0	79,977	0	0	0
Critical (15%)	0	55,393	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-3-5. Total Clear Creek Spring-run Juvenile Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	421,350	421,350	421,350	249,321	249,321
20%	421,350	421,350	421,350	249,321	249,321
30%	421,350	421,350	421,350	249,321	249,321
40%	421,350	421,350	421,350	249,321	249,321
50%	421,350	421,350	421,350	249,321	249,321
60%	421,350	421,350	421,350	249,321	249,321
70%	421,350	421,350	421,350	249,321	249,321
80%	421,350	421,350	353,767	249,321	249,321
90%	353,767	353,767	353,767	249,321	249,321
Long Term					
Full Simulation Period[b]	409,692	410,516	394,677	249,321	249,321
Water Year Types[c]					
Wet (32%)	421,350	421,350	421,350	249,321	249,321
Above Normal (16%)	416,151	421,350	421,350	249,321	249,321
Below Normal (13%)	415,206	415,206	409,062	249,321	249,321
Dry (24%)	407,833	407,833	397,696	249,321	249,321
Critical (15%)	375,476	375,476	289,769	249,321	249,321

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	421,350	421,350	421,350	249,321	249,321
20%	421,350	421,350	421,350	249,321	249,321
30%	421,350	421,350	421,350	249,321	249,321
40%	421,350	421,350	421,350	249,321	249,321
50%	421,350	421,350	421,350	249,321	249,321
60%	421,350	421,350	421,350	249,321	249,321
70%	421,350	421,350	421,350	249,321	249,321
80%	421,350	421,350	353,767	249,321	249,321
90%	353,767	353,767	353,767	249,321	249,321
Long Term					
Full Simulation Period[b]	409,692	410,516	394,677	249,321	249,321
Water Year Types[c]					
Wet (32%)	421,350	421,350	421,350	249,321	249,321
Above Normal (16%)	416,151	421,350	421,350	249,321	249,321
Below Normal (13%)	415,206	415,206	409,062	249,321	249,321
Dry (24%)	407,833	407,833	397,696	249,321	249,321
Critical (15%)	375,476	375,476	289,769	249,321	249,321

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-3-6. Total Clear Creek Spring-run Juvenile Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	421,350	421,350	421,350	249,321	249,321
20%	421,350	421,350	421,350	249,321	249,321
30%	421,350	421,350	421,350	249,321	249,321
40%	421,350	421,350	421,350	249,321	249,321
50%	421,350	421,350	421,350	249,321	249,321
60%	421,350	421,350	421,350	249,321	249,321
70%	421,350	421,350	421,350	249,321	249,321
80%	421,350	421,350	353,767	249,321	249,321
90%	353,767	353,767	353,767	249,321	249,321
Long Term					
Full Simulation Period[b]	409,692	410,516	394,677	249,321	249,321
Water Year Types[c]					
Wet (32%)	421,350	421,350	421,350	249,321	249,321
Above Normal (16%)	416,151	421,350	421,350	249,321	249,321
Below Normal (13%)	415,206	415,206	409,062	249,321	249,321
Dry (24%)	407,833	407,833	397,696	249,321	249,321
Critical (15%)	375,476	375,476	289,769	249,321	249,321

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	421,350	497,000	421,350	249,321	249,321
20%	421,350	497,000	421,350	249,321	249,321
30%	421,350	497,000	421,350	249,321	249,321
40%	421,350	497,000	421,350	249,321	249,321
50%	421,350	497,000	421,350	249,321	249,321
60%	421,350	497,000	421,350	249,321	249,321
70%	421,350	497,000	421,350	249,321	249,321
80%	421,350	497,000	353,767	249,321	249,321
90%	353,767	460,240	353,767	249,321	249,321
Long Term					
Full Simulation Period[b]	409,692	484,633	394,677	249,321	249,354
Water Year Types[c]					
Wet (32%)	421,350	497,000	421,350	249,321	249,321
Above Normal (16%)	416,151	497,000	421,350	249,321	249,321
Below Normal (13%)	415,206	493,658	409,062	249,321	249,321
Dry (24%)	407,833	487,810	397,696	249,321	249,321
Critical (15%)	375,476	430,869	289,769	249,321	249,542

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	0	75,650	0	0	0
20%	0	75,650	0	0	0
30%	0	75,650	0	0	0
40%	0	75,650	0	0	0
50%	0	75,650	0	0	0
60%	0	75,650	0	0	0
70%	0	75,650	0	0	0
80%	0	75,650	0	0	0
90%	0	106,473	0	0	0
Long Term					
Full Simulation Period[b]	0	74,117	0	0	32
Water Year Types[c]					
Wet (32%)	0	75,650	0	0	0
Above Normal (16%)	0	75,650	0	0	0
Below Normal (13%)	0	78,452	0	0	0
Dry (24%)	0	79,977	0	0	0
Critical (15%)	0	55,393	0	0	221

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.4. Lower Clear Creek Fall-run Spawning WUA

Table C-4-1. Lower Clear Creek Fall-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)		
Statistic	Oct	Nov	Dec
Probability of Exceedance[a]			
10%	197,705	197,705	197,705
20%	197,705	197,705	197,705
30%	197,705	197,705	197,705
40%	197,705	197,705	197,705
50%	197,705	197,705	197,705
60%	197,705	197,705	197,705
70%	197,705	197,705	197,705
80%	197,705	197,705	197,705
90%	168,950	168,950	168,950
Long Term			
Full Simulation Period[b]	186,712	189,970	191,622
Water Year Types[c]			
Wet (32%)	197,705	197,705	197,705
Above Normal (16%)	184,084	185,860	191,069
Below Normal (13%)	195,091	195,091	195,091
Dry (24%)	177,529	187,131	190,516
Critical (15%)	173,364	177,702	177,702

Alternative 1

	Monthly WUA (Feet2)		
Statistic	Oct	Nov	Dec
Probability of Exceedance[a]			
10%	197,705	197,705	197,705
20%	197,705	197,705	197,705
30%	197,705	197,705	197,705
40%	197,705	197,705	197,705
50%	197,705	197,705	197,705
60%	197,705	197,705	197,705
70%	197,705	197,705	197,705
80%	197,705	197,705	197,705
90%	168,950	168,950	168,950
Long Term			
Full Simulation Period[b]	187,739	189,970	191,622
Water Year Types[c]			
Wet (32%)	197,705	197,705	197,705
Above Normal (16%)	184,084	185,860	191,069
Below Normal (13%)	195,091	195,091	195,091
Dry (24%)	181,738	187,131	190,516
Critical (15%)	173,364	177,702	177,702

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)		
Statistic	Oct	Nov	Dec
Probability of Exceedance[a]			
10%	0	0	0
20%	0	0	0
30%	0	0	0
40%	0	0	0
50%	0	0	0
60%	0	0	0
70%	0	0	0
80%	0	0	0
90%	0	0	0
Long Term			
Full Simulation Period[b]	1,027	0	0
Water Year Types[c]			
Wet (32%)	0	0	0
Above Normal (16%)	0	0	0
Below Normal (13%)	0	0	0
Dry (24%)	4,210	0	0
Critical (15%)	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-4-2. Lower Clear Creek Fall-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)		
Statistic	Oct	Nov	Dec
Probability of Exceedance[a]			
10%	197,705	197,705	197,705
20%	197,705	197,705	197,705
30%	197,705	197,705	197,705
40%	197,705	197,705	197,705
50%	197,705	197,705	197,705
60%	197,705	197,705	197,705
70%	197,705	197,705	197,705
80%	197,705	197,705	197,705
90%	168,950	168,950	168,950
Long Term			
Full Simulation Period[b]	186,712	189,970	191,622
Water Year Types[c]			
Wet (32%)	197,705	197,705	197,705
Above Normal (16%)	184,084	185,860	191,069
Below Normal (13%)	195,091	195,091	195,091
Dry (24%)	177,529	187,131	190,516
Critical (15%)	173,364	177,702	177,702

Alternative 3

	Monthly WUA (Feet2)		
Statistic	Oct	Nov	Dec
Probability of Exceedance[a]			
10%	197,705	197,705	197,705
20%	197,705	197,705	197,705
30%	197,705	197,705	197,705
40%	197,705	197,705	197,705
50%	197,705	197,705	197,705
60%	197,705	197,705	197,705
70%	197,705	197,705	197,705
80%	197,705	197,705	197,705
90%	168,950	168,950	168,950
Long Term			
Full Simulation Period[b]	187,739	189,970	191,622
Water Year Types[c]			
Wet (32%)	197,705	197,705	197,705
Above Normal (16%)	184,084	185,860	191,069
Below Normal (13%)	195,091	195,091	195,091
Dry (24%)	181,738	187,131	190,516
Critical (15%)	173,364	177,702	177,702

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)		
Statistic	Oct	Nov	Dec
Probability of Exceedance[a]			
10%	0	0	0
20%	0	0	0
30%	0	0	0
40%	0	0	0
50%	0	0	0
60%	0	0	0
70%	0	0	0
80%	0	0	0
90%	0	0	0
Long Term			
Full Simulation Period[b]	1,027	0	0
Water Year Types[c]			
Wet (32%)	0	0	0
Above Normal (16%)	0	0	0
Below Normal (13%)	0	0	0
Dry (24%)	4,210	0	0
Critical (15%)	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-4-3. Lower Clear Creek Fall-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)		
Statistic	Oct	Nov	Dec
Probability of Exceedance[a]			
10%	197,705	197,705	197,705
20%	197,705	197,705	197,705
30%	197,705	197,705	197,705
40%	197,705	197,705	197,705
50%	197,705	197,705	197,705
60%	197,705	197,705	197,705
70%	197,705	197,705	197,705
80%	197,705	197,705	197,705
90%	168,950	168,950	168,950
Long Term			
Full Simulation Period[b]	186,712	189,970	191,622
Water Year Types[c]			
Wet (32%)	197,705	197,705	197,705
Above Normal (16%)	184,084	185,860	191,069
Below Normal (13%)	195,091	195,091	195,091
Dry (24%)	177,529	187,131	190,516
Critical (15%)	173,364	177,702	177,702

Alternative 5

	Monthly WUA (Feet2)		
Statistic	Oct	Nov	Dec
Probability of Exceedance[a]			
10%	197,705	197,705	197,705
20%	197,705	197,705	197,705
30%	197,705	197,705	197,705
40%	197,705	197,705	197,705
50%	197,705	197,705	197,705
60%	197,705	197,705	197,705
70%	197,705	197,705	197,705
80%	197,705	197,705	197,705
90%	168,950	168,950	168,950
Long Term			
Full Simulation Period[b]	187,547	189,970	191,622
Water Year Types[c]			
Wet (32%)	197,705	197,705	197,705
Above Normal (16%)	184,084	185,860	191,069
Below Normal (13%)	195,091	195,091	195,091
Dry (24%)	180,953	187,131	190,516
Critical (15%)	173,364	177,702	177,702

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)		
Statistic	Oct	Nov	Dec
Probability of Exceedance[a]			
10%	0	0	0
20%	0	0	0
30%	0	0	0
40%	0	0	0
50%	0	0	0
60%	0	0	0
70%	0	0	0
80%	0	0	0
90%	0	0	0
Long Term			
Full Simulation Period[b]	835	0	0
Water Year Types[c]			
Wet (32%)	0	0	0
Above Normal (16%)	0	0	0
Below Normal (13%)	0	0	0
Dry (24%)	3,424	0	0
Critical (15%)	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-4-4. Lower Clear Creek Fall-run Spawning WUA, Monthly WUA

Second Basis of Comparison

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	197,705	197,705	197,705
20%	197,705	197,705	197,705
30%	197,705	197,705	197,705
40%	197,705	197,705	197,705
50%	197,705	197,705	197,705
60%	197,705	197,705	197,705
70%	197,705	197,705	197,705
80%	197,705	197,705	197,705
90%	168,950	168,950	168,950
Long Term			
Full Simulation Period[b]	187,739	189,970	191,622
Water Year Types[c]			
Wet (32%)	197,705	197,705	197,705
Above Normal (16%)	184,084	185,860	191,069
Below Normal (13%)	195,091	195,091	195,091
Dry (24%)	181,738	187,131	190,516
Critical (15%)	173,364	177,702	177,702

No Action Alternative

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	197,705	197,705	197,705
20%	197,705	197,705	197,705
30%	197,705	197,705	197,705
40%	197,705	197,705	197,705
50%	197,705	197,705	197,705
60%	197,705	197,705	197,705
70%	197,705	197,705	197,705
80%	197,705	197,705	197,705
90%	168,950	168,950	168,950
Long Term			
Full Simulation Period[b]	186,712	189,970	191,622
Water Year Types[c]			
Wet (32%)	197,705	197,705	197,705
Above Normal (16%)	184,084	185,860	191,069
Below Normal (13%)	195,091	195,091	195,091
Dry (24%)	177,529	187,131	190,516
Critical (15%)	173,364	177,702	177,702

No Action Alternative minus Second Basis of Comparison

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	0	0	0
20%	0	0	0
30%	0	0	0
40%	0	0	0
50%	0	0	0
60%	0	0	0
70%	0	0	0
80%	0	0	0
90%	0	0	0
Long Term			
Full Simulation Period[b]	-1,027	0	0
Water Year Types[c]			
Wet (32%)	0	0	0
Above Normal (16%)	0	0	0
Below Normal (13%)	0	0	0
Dry (24%)	-4,210	0	0
Critical (15%)	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-4-5. Lower Clear Creek Fall-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)		
Statistic	Oct	Nov	Dec
Probability of Exceedance[a]			
10%	197,705	197,705	197,705
20%	197,705	197,705	197,705
30%	197,705	197,705	197,705
40%	197,705	197,705	197,705
50%	197,705	197,705	197,705
60%	197,705	197,705	197,705
70%	197,705	197,705	197,705
80%	197,705	197,705	197,705
90%	168,950	168,950	168,950
Long Term			
Full Simulation Period[b]	187,739	189,970	191,622
Water Year Types[c]			
Wet (32%)	197,705	197,705	197,705
Above Normal (16%)	184,084	185,860	191,069
Below Normal (13%)	195,091	195,091	195,091
Dry (24%)	181,738	187,131	190,516
Critical (15%)	173,364	177,702	177,702

Alternative 3

	Monthly WUA (Feet2)		
Statistic	Oct	Nov	Dec
Probability of Exceedance[a]			
10%	197,705	197,705	197,705
20%	197,705	197,705	197,705
30%	197,705	197,705	197,705
40%	197,705	197,705	197,705
50%	197,705	197,705	197,705
60%	197,705	197,705	197,705
70%	197,705	197,705	197,705
80%	197,705	197,705	197,705
90%	168,950	168,950	168,950
Long Term			
Full Simulation Period[b]	187,739	189,970	191,622
Water Year Types[c]			
Wet (32%)	197,705	197,705	197,705
Above Normal (16%)	184,084	185,860	191,069
Below Normal (13%)	195,091	195,091	195,091
Dry (24%)	181,738	187,131	190,516
Critical (15%)	173,364	177,702	177,702

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)		
Statistic	Oct	Nov	Dec
Probability of Exceedance[a]			
10%	0	0	0
20%	0	0	0
30%	0	0	0
40%	0	0	0
50%	0	0	0
60%	0	0	0
70%	0	0	0
80%	0	0	0
90%	0	0	0
Long Term			
Full Simulation Period[b]	0	0	0
Water Year Types[c]			
Wet (32%)	0	0	0
Above Normal (16%)	0	0	0
Below Normal (13%)	0	0	0
Dry (24%)	0	0	0
Critical (15%)	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-4-6. Lower Clear Creek Fall-run Spawning WUA, Monthly WUA

Second Basis of Comparison

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	197,705	197,705	197,705
20%	197,705	197,705	197,705
30%	197,705	197,705	197,705
40%	197,705	197,705	197,705
50%	197,705	197,705	197,705
60%	197,705	197,705	197,705
70%	197,705	197,705	197,705
80%	197,705	197,705	197,705
90%	168,950	168,950	168,950
Long Term			
Full Simulation Period[b]	187,739	189,970	191,622
Water Year Types[c]			
Wet (32%)	197,705	197,705	197,705
Above Normal (16%)	184,084	185,860	191,069
Below Normal (13%)	195,091	195,091	195,091
Dry (24%)	181,738	187,131	190,516
Critical (15%)	173,364	177,702	177,702

Alternative 5

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	197,705	197,705	197,705
20%	197,705	197,705	197,705
30%	197,705	197,705	197,705
40%	197,705	197,705	197,705
50%	197,705	197,705	197,705
60%	197,705	197,705	197,705
70%	197,705	197,705	197,705
80%	197,705	197,705	197,705
90%	168,950	168,950	168,950
Long Term			
Full Simulation Period[b]	187,547	189,970	191,622
Water Year Types[c]			
Wet (32%)	197,705	197,705	197,705
Above Normal (16%)	184,084	185,860	191,069
Below Normal (13%)	195,091	195,091	195,091
Dry (24%)	180,953	187,131	190,516
Critical (15%)	173,364	177,702	177,702

Alternative 5 minus Second Basis of Comparison

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	0	0	0
20%	0	0	0
30%	0	0	0
40%	0	0	0
50%	0	0	0
60%	0	0	0
70%	0	0	0
80%	0	0	0
90%	0	0	0
Long Term			
Full Simulation Period[b]	-192	0	0
Water Year Types[c]			
Wet (32%)	0	0	0
Above Normal (16%)	0	0	0
Below Normal (13%)	0	0	0
Dry (24%)	-786	0	0
Critical (15%)	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.5. Lower Clear Creek Fall-run Fry Rearing WUA

Table C-5-1. Lower Clear Creek Fall-run Fry Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	490,718	490,718	490,718	490,718
20%	470,453	470,453	470,453	470,453
30%	470,453	470,453	470,453	470,453
40%	470,453	470,453	470,453	470,453
50%	470,453	470,453	470,453	470,453
60%	470,453	470,453	470,453	470,453
70%	470,453	470,453	470,453	470,453
80%	470,453	470,453	470,453	470,453
90%	470,453	470,453	470,453	470,453
Long Term				
Full Simulation Period[b]	472,251	472,004	472,986	473,968
Water Year Types[c]				
Wet (32%)	464,259	464,259	467,356	470,453
Above Normal (16%)	473,571	472,012	472,012	472,012
Below Normal (13%)	472,295	472,295	472,295	472,295
Dry (24%)	474,506	474,506	474,506	474,506
Critical (15%)	484,341	484,341	484,341	484,341

Alternative 1

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	490,718	490,718	490,718	490,718
20%	470,453	470,453	470,453	470,453
30%	470,453	470,453	470,453	470,453
40%	470,453	470,453	470,453	470,453
50%	470,453	470,453	470,453	470,453
60%	470,453	470,453	470,453	470,453
70%	470,453	470,453	470,453	470,453
80%	470,453	470,453	470,453	470,453
90%	470,453	470,453	470,453	470,453
Long Term				
Full Simulation Period[b]	472,251	472,004	472,986	473,968
Water Year Types[c]				
Wet (32%)	464,259	464,259	467,356	470,453
Above Normal (16%)	473,571	472,012	472,012	472,012
Below Normal (13%)	472,295	472,295	472,295	472,295
Dry (24%)	474,506	474,506	474,506	474,506
Critical (15%)	484,341	484,341	484,341	484,341

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	0
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	0	0	0
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	0	0
Dry (24%)	0	0	0	0
Critical (15%)	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-2. Lower Clear Creek Fall-run Fry Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	490,718	490,718	490,718	490,718
20%	470,453	470,453	470,453	470,453
30%	470,453	470,453	470,453	470,453
40%	470,453	470,453	470,453	470,453
50%	470,453	470,453	470,453	470,453
60%	470,453	470,453	470,453	470,453
70%	470,453	470,453	470,453	470,453
80%	470,453	470,453	470,453	470,453
90%	470,453	470,453	470,453	470,453
Long Term				
Full Simulation Period[b]	472,251	472,004	472,986	473,968
Water Year Types[c]				
Wet (32%)	464,259	464,259	467,356	470,453
Above Normal (16%)	473,571	472,012	472,012	472,012
Below Normal (13%)	472,295	472,295	472,295	472,295
Dry (24%)	474,506	474,506	474,506	474,506
Critical (15%)	484,341	484,341	484,341	484,341

Alternative 3

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	490,718	490,718	490,718	490,718
20%	470,453	470,453	470,453	470,453
30%	470,453	470,453	470,453	470,453
40%	470,453	470,453	470,453	470,453
50%	470,453	470,453	470,453	470,453
60%	470,453	470,453	470,453	470,453
70%	470,453	470,453	470,453	470,453
80%	470,453	470,453	470,453	470,453
90%	470,453	470,453	470,453	470,453
Long Term				
Full Simulation Period[b]	472,251	472,004	472,986	473,968
Water Year Types[c]				
Wet (32%)	464,259	464,259	467,356	470,453
Above Normal (16%)	473,571	472,012	472,012	472,012
Below Normal (13%)	472,295	472,295	472,295	472,295
Dry (24%)	474,506	474,506	474,506	474,506
Critical (15%)	484,341	484,341	484,341	484,341

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	0
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	0	0	0
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	0	0
Dry (24%)	0	0	0	0
Critical (15%)	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-3. Lower Clear Creek Fall-run Fry Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	490,718	490,718	490,718	490,718
20%	470,453	470,453	470,453	470,453
30%	470,453	470,453	470,453	470,453
40%	470,453	470,453	470,453	470,453
50%	470,453	470,453	470,453	470,453
60%	470,453	470,453	470,453	470,453
70%	470,453	470,453	470,453	470,453
80%	470,453	470,453	470,453	470,453
90%	470,453	470,453	470,453	470,453
Long Term				
Full Simulation Period[b]	472,251	472,004	472,986	473,968
Water Year Types[c]				
Wet (32%)	464,259	464,259	467,356	470,453
Above Normal (16%)	473,571	472,012	472,012	472,012
Below Normal (13%)	472,295	472,295	472,295	472,295
Dry (24%)	474,506	474,506	474,506	474,506
Critical (15%)	484,341	484,341	484,341	484,341

Alternative 5

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	490,718	490,718	490,718	490,718
20%	470,453	470,453	470,453	470,453
30%	470,453	470,453	470,453	470,453
40%	470,453	470,453	470,453	470,453
50%	470,453	470,453	470,453	470,453
60%	470,453	470,453	470,453	470,453
70%	470,453	470,453	470,453	470,453
80%	470,453	470,453	470,453	470,453
90%	470,453	470,453	470,453	470,453
Long Term				
Full Simulation Period[b]	472,251	472,004	472,986	473,968
Water Year Types[c]				
Wet (32%)	464,259	464,259	467,356	470,453
Above Normal (16%)	473,571	472,012	472,012	472,012
Below Normal (13%)	472,295	472,295	472,295	472,295
Dry (24%)	474,506	474,506	474,506	474,506
Critical (15%)	484,341	484,341	484,341	484,341

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	0
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	0	0	0
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	0	0
Dry (24%)	0	0	0	0
Critical (15%)	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-4. Lower Clear Creek Fall-run Fry Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	490,718	490,718	490,718	490,718
20%	470,453	470,453	470,453	470,453
30%	470,453	470,453	470,453	470,453
40%	470,453	470,453	470,453	470,453
50%	470,453	470,453	470,453	470,453
60%	470,453	470,453	470,453	470,453
70%	470,453	470,453	470,453	470,453
80%	470,453	470,453	470,453	470,453
90%	470,453	470,453	470,453	470,453
Long Term				
Full Simulation Period[b]	472,251	472,004	472,986	473,968
Water Year Types[c]				
Wet (32%)	464,259	464,259	467,356	470,453
Above Normal (16%)	473,571	472,012	472,012	472,012
Below Normal (13%)	472,295	472,295	472,295	472,295
Dry (24%)	474,506	474,506	474,506	474,506
Critical (15%)	484,341	484,341	484,341	484,341

No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	490,718	490,718	490,718	490,718
20%	470,453	470,453	470,453	470,453
30%	470,453	470,453	470,453	470,453
40%	470,453	470,453	470,453	470,453
50%	470,453	470,453	470,453	470,453
60%	470,453	470,453	470,453	470,453
70%	470,453	470,453	470,453	470,453
80%	470,453	470,453	470,453	470,453
90%	470,453	470,453	470,453	470,453
Long Term				
Full Simulation Period[b]	472,251	472,004	472,986	473,968
Water Year Types[c]				
Wet (32%)	464,259	464,259	467,356	470,453
Above Normal (16%)	473,571	472,012	472,012	472,012
Below Normal (13%)	472,295	472,295	472,295	472,295
Dry (24%)	474,506	474,506	474,506	474,506
Critical (15%)	484,341	484,341	484,341	484,341

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	0
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	0	0	0
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	0	0
Dry (24%)	0	0	0	0
Critical (15%)	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-5. Lower Clear Creek Fall-run Fry Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	490,718	490,718	490,718	490,718
20%	470,453	470,453	470,453	470,453
30%	470,453	470,453	470,453	470,453
40%	470,453	470,453	470,453	470,453
50%	470,453	470,453	470,453	470,453
60%	470,453	470,453	470,453	470,453
70%	470,453	470,453	470,453	470,453
80%	470,453	470,453	470,453	470,453
90%	470,453	470,453	470,453	470,453
Long Term				
Full Simulation Period[b]	472,251	472,004	472,986	473,968
Water Year Types[c]				
Wet (32%)	464,259	464,259	467,356	470,453
Above Normal (16%)	473,571	472,012	472,012	472,012
Below Normal (13%)	472,295	472,295	472,295	472,295
Dry (24%)	474,506	474,506	474,506	474,506
Critical (15%)	484,341	484,341	484,341	484,341

Alternative 3

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	490,718	490,718	490,718	490,718
20%	470,453	470,453	470,453	470,453
30%	470,453	470,453	470,453	470,453
40%	470,453	470,453	470,453	470,453
50%	470,453	470,453	470,453	470,453
60%	470,453	470,453	470,453	470,453
70%	470,453	470,453	470,453	470,453
80%	470,453	470,453	470,453	470,453
90%	470,453	470,453	470,453	470,453
Long Term				
Full Simulation Period[b]	472,251	472,004	472,986	473,968
Water Year Types[c]				
Wet (32%)	464,259	464,259	467,356	470,453
Above Normal (16%)	473,571	472,012	472,012	472,012
Below Normal (13%)	472,295	472,295	472,295	472,295
Dry (24%)	474,506	474,506	474,506	474,506
Critical (15%)	484,341	484,341	484,341	484,341

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	0
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	0	0	0
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	0	0
Dry (24%)	0	0	0	0
Critical (15%)	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-5-6. Lower Clear Creek Fall-run Fry Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	490,718	490,718	490,718	490,718
20%	470,453	470,453	470,453	470,453
30%	470,453	470,453	470,453	470,453
40%	470,453	470,453	470,453	470,453
50%	470,453	470,453	470,453	470,453
60%	470,453	470,453	470,453	470,453
70%	470,453	470,453	470,453	470,453
80%	470,453	470,453	470,453	470,453
90%	470,453	470,453	470,453	470,453
Long Term				
Full Simulation Period[b]	472,251	472,004	472,986	473,968
Water Year Types[c]				
Wet (32%)	464,259	464,259	467,356	470,453
Above Normal (16%)	473,571	472,012	472,012	472,012
Below Normal (13%)	472,295	472,295	472,295	472,295
Dry (24%)	474,506	474,506	474,506	474,506
Critical (15%)	484,341	484,341	484,341	484,341

Alternative 5

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	490,718	490,718	490,718	490,718
20%	470,453	470,453	470,453	470,453
30%	470,453	470,453	470,453	470,453
40%	470,453	470,453	470,453	470,453
50%	470,453	470,453	470,453	470,453
60%	470,453	470,453	470,453	470,453
70%	470,453	470,453	470,453	470,453
80%	470,453	470,453	470,453	470,453
90%	470,453	470,453	470,453	470,453
Long Term				
Full Simulation Period[b]	472,251	472,004	472,986	473,968
Water Year Types[c]				
Wet (32%)	464,259	464,259	467,356	470,453
Above Normal (16%)	473,571	472,012	472,012	472,012
Below Normal (13%)	472,295	472,295	472,295	472,295
Dry (24%)	474,506	474,506	474,506	474,506
Critical (15%)	484,341	484,341	484,341	484,341

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	0
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	0	0	0
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	0	0
Dry (24%)	0	0	0	0
Critical (15%)	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.6. Lower Clear Creek Fall-run Juvenile Rearing WUA

Table C-6-1. Lower Clear Creek Fall-run Juvenile Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]					
10%	335,067	318,200	256,126	256,126	296,863
20%	335,067	318,200	256,126	256,126	296,863
30%	335,067	318,200	256,126	256,126	296,863
40%	335,067	318,200	256,126	256,126	296,863
50%	335,067	318,200	256,126	256,126	296,863
60%	335,067	318,200	256,126	256,126	296,863
70%	335,067	318,200	256,126	256,126	296,863
80%	335,067	296,863	256,126	256,126	296,863
90%	327,741	296,863	256,126	256,126	296,863
Long Term					
Full Simulation Period[b]	332,168	309,022	256,126	256,126	295,108
Water Year Types[c]					
Wet (32%)	335,067	318,200	256,126	256,126	296,863
Above Normal (16%)	335,067	318,200	256,126	256,126	296,863
Below Normal (13%)	334,401	314,321	256,126	256,126	296,863
Dry (24%)	333,236	310,732	256,126	256,126	296,863
Critical (15%)	318,916	271,483	256,126	256,126	284,872

Alternative 1

	Monthly WUA (Feet2)				
Statistic	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]					
10%	318,200	318,200	256,126	256,126	296,863
20%	318,200	318,200	256,126	256,126	296,863
30%	318,200	318,200	256,126	256,126	296,863
40%	318,200	318,200	256,126	256,126	296,863
50%	318,200	318,200	256,126	256,126	296,863
60%	318,200	318,200	256,126	256,126	296,863
70%	318,200	318,200	256,126	256,126	296,863
80%	318,200	296,863	256,126	256,126	296,863
90%	296,863	296,863	256,126	256,126	296,863
Long Term					
Full Simulation Period[b]	314,721	309,022	256,126	256,126	295,108
Water Year Types[c]					
Wet (32%)	318,200	318,200	256,126	256,126	296,863
Above Normal (16%)	318,200	318,200	256,126	256,126	296,863
Below Normal (13%)	316,260	314,321	256,126	256,126	296,863
Dry (24%)	313,933	310,732	256,126	256,126	296,863
Critical (15%)	303,318	271,483	256,126	256,126	284,872

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]					
10%	-16,867	0	0	0	0
20%	-16,867	0	0	0	0
30%	-16,867	0	0	0	0
40%	-16,867	0	0	0	0
50%	-16,867	0	0	0	0
60%	-16,867	0	0	0	0
70%	-16,867	0	0	0	0
80%	-16,867	0	0	0	0
90%	-30,878	0	0	0	0
Long Term					
Full Simulation Period[b]	-17,447	0	0	0	0
Water Year Types[c]					
Wet (32%)	-16,867	0	0	0	0
Above Normal (16%)	-16,867	0	0	0	0
Below Normal (13%)	-18,141	0	0	0	0
Dry (24%)	-19,303	0	0	0	0
Critical (15%)	-15,598	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-6-2. Lower Clear Creek Fall-run Juvenile Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]					
10%	335,067	318,200	256,126	256,126	296,863
20%	335,067	318,200	256,126	256,126	296,863
30%	335,067	318,200	256,126	256,126	296,863
40%	335,067	318,200	256,126	256,126	296,863
50%	335,067	318,200	256,126	256,126	296,863
60%	335,067	318,200	256,126	256,126	296,863
70%	335,067	318,200	256,126	256,126	296,863
80%	335,067	296,863	256,126	256,126	296,863
90%	327,741	296,863	256,126	256,126	296,863
Long Term					
Full Simulation Period[b]	332,168	309,022	256,126	256,126	295,108
Water Year Types[c]					
Wet (32%)	335,067	318,200	256,126	256,126	296,863
Above Normal (16%)	335,067	318,200	256,126	256,126	296,863
Below Normal (13%)	334,401	314,321	256,126	256,126	296,863
Dry (24%)	333,236	310,732	256,126	256,126	296,863
Critical (15%)	318,916	271,483	256,126	256,126	284,872

Alternative 3

	Monthly WUA (Feet2)				
Statistic	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]					
10%	318,200	318,200	256,126	256,126	296,863
20%	318,200	318,200	256,126	256,126	296,863
30%	318,200	318,200	256,126	256,126	296,863
40%	318,200	318,200	256,126	256,126	296,863
50%	318,200	318,200	256,126	256,126	296,863
60%	318,200	318,200	256,126	256,126	296,863
70%	318,200	318,200	256,126	256,126	296,863
80%	318,200	296,863	256,126	256,126	296,863
90%	296,863	296,863	256,126	256,126	296,863
Long Term					
Full Simulation Period[b]	314,721	309,022	256,126	256,126	295,108
Water Year Types[c]					
Wet (32%)	318,200	318,200	256,126	256,126	296,863
Above Normal (16%)	318,200	318,200	256,126	256,126	296,863
Below Normal (13%)	316,260	314,321	256,126	256,126	296,863
Dry (24%)	313,933	310,732	256,126	256,126	296,863
Critical (15%)	303,318	271,483	256,126	256,126	284,872

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]					
10%	-16,867	0	0	0	0
20%	-16,867	0	0	0	0
30%	-16,867	0	0	0	0
40%	-16,867	0	0	0	0
50%	-16,867	0	0	0	0
60%	-16,867	0	0	0	0
70%	-16,867	0	0	0	0
80%	-16,867	0	0	0	0
90%	-30,878	0	0	0	0
Long Term					
Full Simulation Period[b]	-17,447	0	0	0	0
Water Year Types[c]					
Wet (32%)	-16,867	0	0	0	0
Above Normal (16%)	-16,867	0	0	0	0
Below Normal (13%)	-18,141	0	0	0	0
Dry (24%)	-19,303	0	0	0	0
Critical (15%)	-15,598	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-6-3. Lower Clear Creek Fall-run Juvenile Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance[a]					
10%	335,067	318,200	256,126	256,126	296,863
20%	335,067	318,200	256,126	256,126	296,863
30%	335,067	318,200	256,126	256,126	296,863
40%	335,067	318,200	256,126	256,126	296,863
50%	335,067	318,200	256,126	256,126	296,863
60%	335,067	318,200	256,126	256,126	296,863
70%	335,067	318,200	256,126	256,126	296,863
80%	335,067	296,863	256,126	256,126	296,863
90%	327,741	296,863	256,126	256,126	296,863
Long Term					
Full Simulation Period[b]	332,168	309,022	256,126	256,126	295,108
Water Year Types[c]					
Wet (32%)	335,067	318,200	256,126	256,126	296,863
Above Normal (16%)	335,067	318,200	256,126	256,126	296,863
Below Normal (13%)	334,401	314,321	256,126	256,126	296,863
Dry (24%)	333,236	310,732	256,126	256,126	296,863
Critical (15%)	318,916	271,483	256,126	256,126	284,872

Alternative 5

	Monthly WUA (Feet2)				
Statistic	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance[a]					
10%	335,067	318,200	256,126	256,126	296,863
20%	335,067	318,200	256,126	256,126	296,863
30%	335,067	318,200	256,126	256,126	296,863
40%	335,067	318,200	256,126	256,126	296,863
50%	335,067	318,200	256,126	256,126	296,863
60%	335,067	318,200	256,126	256,126	296,863
70%	335,067	318,200	256,126	256,126	296,863
80%	335,067	296,863	256,126	256,126	296,863
90%	327,741	296,863	256,126	256,126	296,863
Long Term					
Full Simulation Period[b]	332,168	309,022	256,126	256,140	295,108
Water Year Types[c]					
Wet (32%)	335,067	318,200	256,126	256,126	296,863
Above Normal (16%)	335,067	318,200	256,126	256,126	296,863
Below Normal (13%)	334,401	314,321	256,126	256,126	296,863
Dry (24%)	333,236	310,732	256,126	256,126	296,863
Critical (15%)	318,916	271,483	256,126	256,220	284,872

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	14	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	94	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-6-4. Lower Clear Creek Fall-run Juvenile Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]					
10%	318,200	318,200	256,126	256,126	296,863
20%	318,200	318,200	256,126	256,126	296,863
30%	318,200	318,200	256,126	256,126	296,863
40%	318,200	318,200	256,126	256,126	296,863
50%	318,200	318,200	256,126	256,126	296,863
60%	318,200	318,200	256,126	256,126	296,863
70%	318,200	318,200	256,126	256,126	296,863
80%	318,200	296,863	256,126	256,126	296,863
90%	296,863	296,863	256,126	256,126	296,863
Long Term					
Full Simulation Period[b]	314,721	309,022	256,126	256,126	295,108
Water Year Types[c]					
Wet (32%)	318,200	318,200	256,126	256,126	296,863
Above Normal (16%)	318,200	318,200	256,126	256,126	296,863
Below Normal (13%)	316,260	314,321	256,126	256,126	296,863
Dry (24%)	313,933	310,732	256,126	256,126	296,863
Critical (15%)	303,318	271,483	256,126	256,126	284,872

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]					
10%	335,067	318,200	256,126	256,126	296,863
20%	335,067	318,200	256,126	256,126	296,863
30%	335,067	318,200	256,126	256,126	296,863
40%	335,067	318,200	256,126	256,126	296,863
50%	335,067	318,200	256,126	256,126	296,863
60%	335,067	318,200	256,126	256,126	296,863
70%	335,067	318,200	256,126	256,126	296,863
80%	335,067	296,863	256,126	256,126	296,863
90%	327,741	296,863	256,126	256,126	296,863
Long Term					
Full Simulation Period[b]	332,168	309,022	256,126	256,126	295,108
Water Year Types[c]					
Wet (32%)	335,067	318,200	256,126	256,126	296,863
Above Normal (16%)	335,067	318,200	256,126	256,126	296,863
Below Normal (13%)	334,401	314,321	256,126	256,126	296,863
Dry (24%)	333,236	310,732	256,126	256,126	296,863
Critical (15%)	318,916	271,483	256,126	256,126	284,872

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]					
10%	16,867	0	0	0	0
20%	16,867	0	0	0	0
30%	16,867	0	0	0	0
40%	16,867	0	0	0	0
50%	16,867	0	0	0	0
60%	16,867	0	0	0	0
70%	16,867	0	0	0	0
80%	16,867	0	0	0	0
90%	30,878	0	0	0	0
Long Term					
Full Simulation Period[b]	17,447	0	0	0	0
Water Year Types[c]					
Wet (32%)	16,867	0	0	0	0
Above Normal (16%)	16,867	0	0	0	0
Below Normal (13%)	18,141	0	0	0	0
Dry (24%)	19,303	0	0	0	0
Critical (15%)	15,598	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-6-5. Lower Clear Creek Fall-run Juvenile Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]					
10%	318,200	318,200	256,126	256,126	296,863
20%	318,200	318,200	256,126	256,126	296,863
30%	318,200	318,200	256,126	256,126	296,863
40%	318,200	318,200	256,126	256,126	296,863
50%	318,200	318,200	256,126	256,126	296,863
60%	318,200	318,200	256,126	256,126	296,863
70%	318,200	318,200	256,126	256,126	296,863
80%	318,200	296,863	256,126	256,126	296,863
90%	296,863	296,863	256,126	256,126	296,863
Long Term					
Full Simulation Period[b]	314,721	309,022	256,126	256,126	295,108
Water Year Types[c]					
Wet (32%)	318,200	318,200	256,126	256,126	296,863
Above Normal (16%)	318,200	318,200	256,126	256,126	296,863
Below Normal (13%)	316,260	314,321	256,126	256,126	296,863
Dry (24%)	313,933	310,732	256,126	256,126	296,863
Critical (15%)	303,318	271,483	256,126	256,126	284,872

Alternative 3

	Monthly WUA (Feet2)				
Statistic	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]					
10%	318,200	318,200	256,126	256,126	296,863
20%	318,200	318,200	256,126	256,126	296,863
30%	318,200	318,200	256,126	256,126	296,863
40%	318,200	318,200	256,126	256,126	296,863
50%	318,200	318,200	256,126	256,126	296,863
60%	318,200	318,200	256,126	256,126	296,863
70%	318,200	318,200	256,126	256,126	296,863
80%	318,200	296,863	256,126	256,126	296,863
90%	296,863	296,863	256,126	256,126	296,863
Long Term					
Full Simulation Period[b]	314,721	309,022	256,126	256,126	295,108
Water Year Types[c]					
Wet (32%)	318,200	318,200	256,126	256,126	296,863
Above Normal (16%)	318,200	318,200	256,126	256,126	296,863
Below Normal (13%)	316,260	314,321	256,126	256,126	296,863
Dry (24%)	313,933	310,732	256,126	256,126	296,863
Critical (15%)	303,318	271,483	256,126	256,126	284,872

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-6-6. Lower Clear Creek Fall-run Juvenile Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]					
10%	318,200	318,200	256,126	256,126	296,863
20%	318,200	318,200	256,126	256,126	296,863
30%	318,200	318,200	256,126	256,126	296,863
40%	318,200	318,200	256,126	256,126	296,863
50%	318,200	318,200	256,126	256,126	296,863
60%	318,200	318,200	256,126	256,126	296,863
70%	318,200	318,200	256,126	256,126	296,863
80%	318,200	296,863	256,126	256,126	296,863
90%	296,863	296,863	256,126	256,126	296,863
Long Term					
Full Simulation Period[b]	314,721	309,022	256,126	256,126	295,108
Water Year Types[c]					
Wet (32%)	318,200	318,200	256,126	256,126	296,863
Above Normal (16%)	318,200	318,200	256,126	256,126	296,863
Below Normal (13%)	316,260	314,321	256,126	256,126	296,863
Dry (24%)	313,933	310,732	256,126	256,126	296,863
Critical (15%)	303,318	271,483	256,126	256,126	284,872

Alternative 5

	Monthly WUA (Feet2)				
Statistic	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]					
10%	335,067	318,200	256,126	256,126	296,863
20%	335,067	318,200	256,126	256,126	296,863
30%	335,067	318,200	256,126	256,126	296,863
40%	335,067	318,200	256,126	256,126	296,863
50%	335,067	318,200	256,126	256,126	296,863
60%	335,067	318,200	256,126	256,126	296,863
70%	335,067	318,200	256,126	256,126	296,863
80%	335,067	296,863	256,126	256,126	296,863
90%	327,741	296,863	256,126	256,126	296,863
Long Term					
Full Simulation Period[b]	332,168	309,022	256,126	256,140	295,108
Water Year Types[c]					
Wet (32%)	335,067	318,200	256,126	256,126	296,863
Above Normal (16%)	335,067	318,200	256,126	256,126	296,863
Below Normal (13%)	334,401	314,321	256,126	256,126	296,863
Dry (24%)	333,236	310,732	256,126	256,126	296,863
Critical (15%)	318,916	271,483	256,126	256,220	284,872

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]					
10%	16,867	0	0	0	0
20%	16,867	0	0	0	0
30%	16,867	0	0	0	0
40%	16,867	0	0	0	0
50%	16,867	0	0	0	0
60%	16,867	0	0	0	0
70%	16,867	0	0	0	0
80%	16,867	0	0	0	0
90%	30,878	0	0	0	0
Long Term					
Full Simulation Period[b]	17,447	0	0	14	0
Water Year Types[c]					
Wet (32%)	16,867	0	0	0	0
Above Normal (16%)	16,867	0	0	0	0
Below Normal (13%)	18,141	0	0	0	0
Dry (24%)	19,303	0	0	0	0
Critical (15%)	15,598	0	0	94	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.7. Total Clear Creek Steelhead/Rainbow Trout Spawning WUA

Table C-7-1. Total Clear Creek Steelhead/Rainbow Trout Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	87,297	87,297	87,297	87,297	87,297
20%	87,297	87,297	87,297	87,297	87,297
30%	87,297	87,297	87,297	87,297	87,297
40%	87,297	87,297	87,297	87,297	87,297
50%	87,297	87,297	87,297	87,297	87,297
60%	87,297	87,297	87,297	87,297	87,297
70%	87,297	87,297	87,297	87,297	87,297
80%	87,297	87,297	87,297	87,297	87,297
90%	73,006	73,006	73,006	73,006	73,006
Long Term					
Full Simulation Period[b]	84,256	83,874	84,048	84,414	84,779
Water Year Types[c]					
Wet (32%)	87,297	84,991	84,991	86,144	87,297
Above Normal (16%)	83,999	85,098	86,198	86,198	86,198
Below Normal (13%)	85,998	85,998	85,998	85,998	85,998
Dry (24%)	83,724	84,439	84,439	84,439	84,439
Critical (15%)	77,237	77,237	77,237	77,237	77,237

Alternative 1

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	87,297	87,297	87,297	87,297	87,297
20%	87,297	87,297	87,297	87,297	87,297
30%	87,297	87,297	87,297	87,297	87,297
40%	87,297	87,297	87,297	87,297	87,297
50%	87,297	87,297	87,297	87,297	87,297
60%	87,297	87,297	87,297	87,297	87,297
70%	87,297	87,297	87,297	87,297	87,297
80%	87,297	87,297	87,297	87,297	87,297
90%	73,006	73,006	73,006	73,006	73,006
Long Term					
Full Simulation Period[b]	84,256	83,874	84,048	84,414	84,779
Water Year Types[c]					
Wet (32%)	87,297	84,991	84,991	86,144	87,297
Above Normal (16%)	83,999	85,098	86,198	86,198	86,198
Below Normal (13%)	85,998	85,998	85,998	85,998	85,998
Dry (24%)	83,724	84,439	84,439	84,439	84,439
Critical (15%)	77,237	77,237	77,237	77,237	77,237

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-7-2. Total Clear Creek Steelhead/Rainbow Trout Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	87,297	87,297	87,297	87,297	87,297
20%	87,297	87,297	87,297	87,297	87,297
30%	87,297	87,297	87,297	87,297	87,297
40%	87,297	87,297	87,297	87,297	87,297
50%	87,297	87,297	87,297	87,297	87,297
60%	87,297	87,297	87,297	87,297	87,297
70%	87,297	87,297	87,297	87,297	87,297
80%	87,297	87,297	87,297	87,297	87,297
90%	73,006	73,006	73,006	73,006	73,006
Long Term					
Full Simulation Period[b]	84,256	83,874	84,048	84,414	84,779
Water Year Types[c]					
Wet (32%)	87,297	84,991	84,991	86,144	87,297
Above Normal (16%)	83,999	85,098	86,198	86,198	86,198
Below Normal (13%)	85,998	85,998	85,998	85,998	85,998
Dry (24%)	83,724	84,439	84,439	84,439	84,439
Critical (15%)	77,237	77,237	77,237	77,237	77,237

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	87,297	87,297	87,297	87,297	87,297
20%	87,297	87,297	87,297	87,297	87,297
30%	87,297	87,297	87,297	87,297	87,297
40%	87,297	87,297	87,297	87,297	87,297
50%	87,297	87,297	87,297	87,297	87,297
60%	87,297	87,297	87,297	87,297	87,297
70%	87,297	87,297	87,297	87,297	87,297
80%	87,297	87,297	87,297	87,297	87,297
90%	73,006	73,006	73,006	73,006	73,006
Long Term					
Full Simulation Period[b]	84,256	83,874	84,048	84,414	84,779
Water Year Types[c]					
Wet (32%)	87,297	84,991	84,991	86,144	87,297
Above Normal (16%)	83,999	85,098	86,198	86,198	86,198
Below Normal (13%)	85,998	85,998	85,998	85,998	85,998
Dry (24%)	83,724	84,439	84,439	84,439	84,439
Critical (15%)	77,237	77,237	77,237	77,237	77,237

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-7-3. Total Clear Creek Steelhead/Rainbow Trout Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	87,297	87,297	87,297	87,297	87,297
20%	87,297	87,297	87,297	87,297	87,297
30%	87,297	87,297	87,297	87,297	87,297
40%	87,297	87,297	87,297	87,297	87,297
50%	87,297	87,297	87,297	87,297	87,297
60%	87,297	87,297	87,297	87,297	87,297
70%	87,297	87,297	87,297	87,297	87,297
80%	87,297	87,297	87,297	87,297	87,297
90%	73,006	73,006	73,006	73,006	73,006
Long Term					
Full Simulation Period[b]	84,256	83,874	84,048	84,414	84,779
Water Year Types[c]					
Wet (32%)	87,297	84,991	84,991	86,144	87,297
Above Normal (16%)	83,999	85,098	86,198	86,198	86,198
Below Normal (13%)	85,998	85,998	85,998	85,998	85,998
Dry (24%)	83,724	84,439	84,439	84,439	84,439
Critical (15%)	77,237	77,237	77,237	77,237	77,237

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	87,297	87,297	87,297	87,297	87,297
20%	87,297	87,297	87,297	87,297	87,297
30%	87,297	87,297	87,297	87,297	87,297
40%	87,297	87,297	87,297	87,297	87,297
50%	87,297	87,297	87,297	87,297	87,297
60%	87,297	87,297	87,297	87,297	87,297
70%	87,297	87,297	87,297	87,297	87,297
80%	87,297	87,297	87,297	87,297	87,297
90%	73,006	73,006	73,006	73,006	73,006
Long Term					
Full Simulation Period[b]	84,256	83,874	84,048	84,414	84,779
Water Year Types[c]					
Wet (32%)	87,297	84,991	84,991	86,144	87,297
Above Normal (16%)	83,999	85,098	86,198	86,198	86,198
Below Normal (13%)	85,998	85,998	85,998	85,998	85,998
Dry (24%)	83,724	84,439	84,439	84,439	84,439
Critical (15%)	77,237	77,237	77,237	77,237	77,237

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-7-4. Total Clear Creek Steelhead/Rainbow Trout Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	87,297	87,297	87,297	87,297	87,297
20%	87,297	87,297	87,297	87,297	87,297
30%	87,297	87,297	87,297	87,297	87,297
40%	87,297	87,297	87,297	87,297	87,297
50%	87,297	87,297	87,297	87,297	87,297
60%	87,297	87,297	87,297	87,297	87,297
70%	87,297	87,297	87,297	87,297	87,297
80%	87,297	87,297	87,297	87,297	87,297
90%	73,006	73,006	73,006	73,006	73,006
Long Term					
Full Simulation Period[b]	84,256	83,874	84,048	84,414	84,779
Water Year Types[c]					
Wet (32%)	87,297	84,991	84,991	86,144	87,297
Above Normal (16%)	83,999	85,098	86,198	86,198	86,198
Below Normal (13%)	85,998	85,998	85,998	85,998	85,998
Dry (24%)	83,724	84,439	84,439	84,439	84,439
Critical (15%)	77,237	77,237	77,237	77,237	77,237

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	87,297	87,297	87,297	87,297	87,297
20%	87,297	87,297	87,297	87,297	87,297
30%	87,297	87,297	87,297	87,297	87,297
40%	87,297	87,297	87,297	87,297	87,297
50%	87,297	87,297	87,297	87,297	87,297
60%	87,297	87,297	87,297	87,297	87,297
70%	87,297	87,297	87,297	87,297	87,297
80%	87,297	87,297	87,297	87,297	87,297
90%	73,006	73,006	73,006	73,006	73,006
Long Term					
Full Simulation Period[b]	84,256	83,874	84,048	84,414	84,779
Water Year Types[c]					
Wet (32%)	87,297	84,991	84,991	86,144	87,297
Above Normal (16%)	83,999	85,098	86,198	86,198	86,198
Below Normal (13%)	85,998	85,998	85,998	85,998	85,998
Dry (24%)	83,724	84,439	84,439	84,439	84,439
Critical (15%)	77,237	77,237	77,237	77,237	77,237

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-7-5. Total Clear Creek Steelhead/Rainbow Trout Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	87,297	87,297	87,297	87,297	87,297
20%	87,297	87,297	87,297	87,297	87,297
30%	87,297	87,297	87,297	87,297	87,297
40%	87,297	87,297	87,297	87,297	87,297
50%	87,297	87,297	87,297	87,297	87,297
60%	87,297	87,297	87,297	87,297	87,297
70%	87,297	87,297	87,297	87,297	87,297
80%	87,297	87,297	87,297	87,297	87,297
90%	73,006	73,006	73,006	73,006	73,006
Long Term					
Full Simulation Period[b]	84,256	83,874	84,048	84,414	84,779
Water Year Types[c]					
Wet (32%)	87,297	84,991	84,991	86,144	87,297
Above Normal (16%)	83,999	85,098	86,198	86,198	86,198
Below Normal (13%)	85,998	85,998	85,998	85,998	85,998
Dry (24%)	83,724	84,439	84,439	84,439	84,439
Critical (15%)	77,237	77,237	77,237	77,237	77,237

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	87,297	87,297	87,297	87,297	87,297
20%	87,297	87,297	87,297	87,297	87,297
30%	87,297	87,297	87,297	87,297	87,297
40%	87,297	87,297	87,297	87,297	87,297
50%	87,297	87,297	87,297	87,297	87,297
60%	87,297	87,297	87,297	87,297	87,297
70%	87,297	87,297	87,297	87,297	87,297
80%	87,297	87,297	87,297	87,297	87,297
90%	73,006	73,006	73,006	73,006	73,006
Long Term					
Full Simulation Period[b]	84,256	83,874	84,048	84,414	84,779
Water Year Types[c]					
Wet (32%)	87,297	84,991	84,991	86,144	87,297
Above Normal (16%)	83,999	85,098	86,198	86,198	86,198
Below Normal (13%)	85,998	85,998	85,998	85,998	85,998
Dry (24%)	83,724	84,439	84,439	84,439	84,439
Critical (15%)	77,237	77,237	77,237	77,237	77,237

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-7-6. Total Clear Creek Steelhead/Rainbow Trout Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	87,297	87,297	87,297	87,297	87,297
20%	87,297	87,297	87,297	87,297	87,297
30%	87,297	87,297	87,297	87,297	87,297
40%	87,297	87,297	87,297	87,297	87,297
50%	87,297	87,297	87,297	87,297	87,297
60%	87,297	87,297	87,297	87,297	87,297
70%	87,297	87,297	87,297	87,297	87,297
80%	87,297	87,297	87,297	87,297	87,297
90%	73,006	73,006	73,006	73,006	73,006
Long Term					
Full Simulation Period[b]	84,256	83,874	84,048	84,414	84,779
Water Year Types[c]					
Wet (32%)	87,297	84,991	84,991	86,144	87,297
Above Normal (16%)	83,999	85,098	86,198	86,198	86,198
Below Normal (13%)	85,998	85,998	85,998	85,998	85,998
Dry (24%)	83,724	84,439	84,439	84,439	84,439
Critical (15%)	77,237	77,237	77,237	77,237	77,237

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	87,297	87,297	87,297	87,297	87,297
20%	87,297	87,297	87,297	87,297	87,297
30%	87,297	87,297	87,297	87,297	87,297
40%	87,297	87,297	87,297	87,297	87,297
50%	87,297	87,297	87,297	87,297	87,297
60%	87,297	87,297	87,297	87,297	87,297
70%	87,297	87,297	87,297	87,297	87,297
80%	87,297	87,297	87,297	87,297	87,297
90%	73,006	73,006	73,006	73,006	73,006
Long Term					
Full Simulation Period[b]	84,256	83,874	84,048	84,414	84,779
Water Year Types[c]					
Wet (32%)	87,297	84,991	84,991	86,144	87,297
Above Normal (16%)	83,999	85,098	86,198	86,198	86,198
Below Normal (13%)	85,998	85,998	85,998	85,998	85,998
Dry (24%)	83,724	84,439	84,439	84,439	84,439
Critical (15%)	77,237	77,237	77,237	77,237	77,237

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.8. Total Clear Creek Steelhead/Rainbow Trout Fry Rearing WUA

Table C-8-1. Total Clear Creek Steelhead/Rainbow Trout Fry Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	209,184	209,184	209,184	212,960	209,184
20%	203,238	203,238	203,238	212,960	209,184
30%	203,238	203,238	203,238	212,960	203,238
40%	203,238	203,238	203,238	212,960	203,238
50%	203,238	203,238	203,238	212,960	203,238
60%	203,238	203,238	203,238	212,960	203,238
70%	203,238	203,238	203,238	212,960	203,238
80%	203,238	203,238	203,238	212,960	203,238
90%	203,238	203,238	203,238	209,153	203,238
Long Term					
Full Simulation Period[b]	206,013	205,132	204,251	212,118	205,684
Water Year Types[c]					
Wet (32%)	208,796	206,017	203,238	212,960	203,238
Above Normal (16%)	203,695	203,695	203,695	212,960	203,238
Below Normal (13%)	203,779	203,779	203,779	212,614	204,319
Dry (24%)	204,427	204,427	204,427	212,009	205,319
Critical (15%)	207,187	207,187	207,187	209,104	215,493

Alternative 1

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	209,184	209,184	209,184	209,184	209,184
20%	203,238	203,238	203,238	203,238	209,184
30%	203,238	203,238	203,238	203,238	203,238
40%	203,238	203,238	203,238	203,238	203,238
50%	203,238	203,238	203,238	203,238	203,238
60%	203,238	203,238	203,238	203,238	203,238
70%	203,238	203,238	203,238	203,238	203,238
80%	203,238	203,238	203,238	203,238	203,238
90%	203,238	203,238	203,238	203,238	203,238
Long Term					
Full Simulation Period[b]	206,013	205,132	204,251	204,178	205,684
Water Year Types[c]					
Wet (32%)	208,796	206,017	203,238	203,238	203,238
Above Normal (16%)	203,695	203,695	203,695	203,238	203,238
Below Normal (13%)	203,779	203,779	203,779	203,779	204,319
Dry (24%)	204,427	204,427	204,427	204,427	205,319
Critical (15%)	207,187	207,187	207,187	207,187	215,493

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	0	0	0	-3,776	0
20%	0	0	0	-9,722	0
30%	0	0	0	-9,722	0
40%	0	0	0	-9,722	0
50%	0	0	0	-9,722	0
60%	0	0	0	-9,722	0
70%	0	0	0	-9,722	0
80%	0	0	0	-9,722	0
90%	0	0	0	-5,915	0
Long Term					
Full Simulation Period[b]	0	0	0	-7,939	0
Water Year Types[c]					
Wet (32%)	0	0	0	-9,722	0
Above Normal (16%)	0	0	0	-9,722	0
Below Normal (13%)	0	0	0	-8,836	0
Dry (24%)	0	0	0	-7,581	0
Critical (15%)	0	0	0	-1,917	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-8-2. Total Clear Creek Steelhead/Rainbow Trout Fry Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	209,184	209,184	209,184	212,960	209,184
20%	203,238	203,238	203,238	212,960	209,184
30%	203,238	203,238	203,238	212,960	203,238
40%	203,238	203,238	203,238	212,960	203,238
50%	203,238	203,238	203,238	212,960	203,238
60%	203,238	203,238	203,238	212,960	203,238
70%	203,238	203,238	203,238	212,960	203,238
80%	203,238	203,238	203,238	212,960	203,238
90%	203,238	203,238	203,238	209,153	203,238
Long Term					
Full Simulation Period[b]	206,013	205,132	204,251	212,118	205,684
Water Year Types[c]					
Wet (32%)	208,796	206,017	203,238	212,960	203,238
Above Normal (16%)	203,695	203,695	203,695	212,960	203,238
Below Normal (13%)	203,779	203,779	203,779	212,614	204,319
Dry (24%)	204,427	204,427	204,427	212,009	205,319
Critical (15%)	207,187	207,187	207,187	209,104	215,493

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	209,184	209,184	209,184	209,184	209,184
20%	203,238	203,238	203,238	203,238	209,184
30%	203,238	203,238	203,238	203,238	203,238
40%	203,238	203,238	203,238	203,238	203,238
50%	203,238	203,238	203,238	203,238	203,238
60%	203,238	203,238	203,238	203,238	203,238
70%	203,238	203,238	203,238	203,238	203,238
80%	203,238	203,238	203,238	203,238	203,238
90%	203,238	203,238	203,238	203,238	203,238
Long Term					
Full Simulation Period[b]	206,013	205,132	204,251	204,178	205,684
Water Year Types[c]					
Wet (32%)	208,796	206,017	203,238	203,238	203,238
Above Normal (16%)	203,695	203,695	203,695	203,238	203,238
Below Normal (13%)	203,779	203,779	203,779	203,779	204,319
Dry (24%)	204,427	204,427	204,427	204,427	205,319
Critical (15%)	207,187	207,187	207,187	207,187	215,493

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	0	0	0	-3,776	0
20%	0	0	0	-9,722	0
30%	0	0	0	-9,722	0
40%	0	0	0	-9,722	0
50%	0	0	0	-9,722	0
60%	0	0	0	-9,722	0
70%	0	0	0	-9,722	0
80%	0	0	0	-9,722	0
90%	0	0	0	-5,915	0
Long Term					
Full Simulation Period[b]	0	0	0	-7,939	0
Water Year Types[c]					
Wet (32%)	0	0	0	-9,722	0
Above Normal (16%)	0	0	0	-9,722	0
Below Normal (13%)	0	0	0	-8,836	0
Dry (24%)	0	0	0	-7,581	0
Critical (15%)	0	0	0	-1,917	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-8-3. Total Clear Creek Steelhead/Rainbow Trout Fry Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	209,184	209,184	209,184	212,960	209,184
20%	203,238	203,238	203,238	212,960	209,184
30%	203,238	203,238	203,238	212,960	203,238
40%	203,238	203,238	203,238	212,960	203,238
50%	203,238	203,238	203,238	212,960	203,238
60%	203,238	203,238	203,238	212,960	203,238
70%	203,238	203,238	203,238	212,960	203,238
80%	203,238	203,238	203,238	212,960	203,238
90%	203,238	203,238	203,238	209,153	203,238
Long Term					
Full Simulation Period[b]	206,013	205,132	204,251	212,118	205,684
Water Year Types[c]					
Wet (32%)	208,796	206,017	203,238	212,960	203,238
Above Normal (16%)	203,695	203,695	203,695	212,960	203,238
Below Normal (13%)	203,779	203,779	203,779	212,614	204,319
Dry (24%)	204,427	204,427	204,427	212,009	205,319
Critical (15%)	207,187	207,187	207,187	209,104	215,493

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	209,184	209,184	209,184	212,960	209,184
20%	203,238	203,238	203,238	212,960	209,184
30%	203,238	203,238	203,238	212,960	203,238
40%	203,238	203,238	203,238	212,960	203,238
50%	203,238	203,238	203,238	212,960	203,238
60%	203,238	203,238	203,238	212,960	203,238
70%	203,238	203,238	203,238	212,960	203,238
80%	203,238	203,238	203,238	212,960	203,238
90%	203,238	203,238	203,238	209,153	203,238
Long Term					
Full Simulation Period[b]	206,013	205,132	204,251	212,118	205,684
Water Year Types[c]					
Wet (32%)	208,796	206,017	203,238	212,960	203,238
Above Normal (16%)	203,695	203,695	203,695	212,960	203,238
Below Normal (13%)	203,779	203,779	203,779	212,614	204,319
Dry (24%)	204,427	204,427	204,427	212,009	205,319
Critical (15%)	207,187	207,187	207,187	209,104	215,493

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-8-4. Total Clear Creek Steelhead/Rainbow Trout Fry Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	209,184	209,184	209,184	209,184	209,184
20%	203,238	203,238	203,238	203,238	209,184
30%	203,238	203,238	203,238	203,238	203,238
40%	203,238	203,238	203,238	203,238	203,238
50%	203,238	203,238	203,238	203,238	203,238
60%	203,238	203,238	203,238	203,238	203,238
70%	203,238	203,238	203,238	203,238	203,238
80%	203,238	203,238	203,238	203,238	203,238
90%	203,238	203,238	203,238	203,238	203,238
Long Term					
Full Simulation Period[b]	206,013	205,132	204,251	204,178	205,684
Water Year Types[c]					
Wet (32%)	208,796	206,017	203,238	203,238	203,238
Above Normal (16%)	203,695	203,695	203,695	203,238	203,238
Below Normal (13%)	203,779	203,779	203,779	203,779	204,319
Dry (24%)	204,427	204,427	204,427	204,427	205,319
Critical (15%)	207,187	207,187	207,187	207,187	215,493

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	209,184	209,184	209,184	212,960	209,184
20%	203,238	203,238	203,238	212,960	209,184
30%	203,238	203,238	203,238	212,960	203,238
40%	203,238	203,238	203,238	212,960	203,238
50%	203,238	203,238	203,238	212,960	203,238
60%	203,238	203,238	203,238	212,960	203,238
70%	203,238	203,238	203,238	212,960	203,238
80%	203,238	203,238	203,238	212,960	203,238
90%	203,238	203,238	203,238	209,153	203,238
Long Term					
Full Simulation Period[b]	206,013	205,132	204,251	212,118	205,684
Water Year Types[c]					
Wet (32%)	208,796	206,017	203,238	212,960	203,238
Above Normal (16%)	203,695	203,695	203,695	212,960	203,238
Below Normal (13%)	203,779	203,779	203,779	212,614	204,319
Dry (24%)	204,427	204,427	204,427	212,009	205,319
Critical (15%)	207,187	207,187	207,187	209,104	215,493

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	0	0	0	3,776	0
20%	0	0	0	9,722	0
30%	0	0	0	9,722	0
40%	0	0	0	9,722	0
50%	0	0	0	9,722	0
60%	0	0	0	9,722	0
70%	0	0	0	9,722	0
80%	0	0	0	9,722	0
90%	0	0	0	5,915	0
Long Term					
Full Simulation Period[b]	0	0	0	7,939	0
Water Year Types[c]					
Wet (32%)	0	0	0	9,722	0
Above Normal (16%)	0	0	0	9,722	0
Below Normal (13%)	0	0	0	8,836	0
Dry (24%)	0	0	0	7,581	0
Critical (15%)	0	0	0	1,917	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-8-5. Total Clear Creek Steelhead/Rainbow Trout Fry Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	209,184	209,184	209,184	209,184	209,184
20%	203,238	203,238	203,238	203,238	209,184
30%	203,238	203,238	203,238	203,238	203,238
40%	203,238	203,238	203,238	203,238	203,238
50%	203,238	203,238	203,238	203,238	203,238
60%	203,238	203,238	203,238	203,238	203,238
70%	203,238	203,238	203,238	203,238	203,238
80%	203,238	203,238	203,238	203,238	203,238
90%	203,238	203,238	203,238	203,238	203,238
Long Term					
Full Simulation Period[b]	206,013	205,132	204,251	204,178	205,684
Water Year Types[c]					
Wet (32%)	208,796	206,017	203,238	203,238	203,238
Above Normal (16%)	203,695	203,695	203,695	203,238	203,238
Below Normal (13%)	203,779	203,779	203,779	203,779	204,319
Dry (24%)	204,427	204,427	204,427	204,427	205,319
Critical (15%)	207,187	207,187	207,187	207,187	215,493

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	209,184	209,184	209,184	209,184	209,184
20%	203,238	203,238	203,238	203,238	209,184
30%	203,238	203,238	203,238	203,238	203,238
40%	203,238	203,238	203,238	203,238	203,238
50%	203,238	203,238	203,238	203,238	203,238
60%	203,238	203,238	203,238	203,238	203,238
70%	203,238	203,238	203,238	203,238	203,238
80%	203,238	203,238	203,238	203,238	203,238
90%	203,238	203,238	203,238	203,238	203,238
Long Term					
Full Simulation Period[b]	206,013	205,132	204,251	204,178	205,684
Water Year Types[c]					
Wet (32%)	208,796	206,017	203,238	203,238	203,238
Above Normal (16%)	203,695	203,695	203,695	203,238	203,238
Below Normal (13%)	203,779	203,779	203,779	203,779	204,319
Dry (24%)	204,427	204,427	204,427	204,427	205,319
Critical (15%)	207,187	207,187	207,187	207,187	215,493

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-8-6. Total Clear Creek Steelhead/Rainbow Trout Fry Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	209,184	209,184	209,184	209,184	209,184
20%	203,238	203,238	203,238	203,238	209,184
30%	203,238	203,238	203,238	203,238	203,238
40%	203,238	203,238	203,238	203,238	203,238
50%	203,238	203,238	203,238	203,238	203,238
60%	203,238	203,238	203,238	203,238	203,238
70%	203,238	203,238	203,238	203,238	203,238
80%	203,238	203,238	203,238	203,238	203,238
90%	203,238	203,238	203,238	203,238	203,238
Long Term					
Full Simulation Period[b]	206,013	205,132	204,251	204,178	205,684
Water Year Types[c]					
Wet (32%)	208,796	206,017	203,238	203,238	203,238
Above Normal (16%)	203,695	203,695	203,695	203,238	203,238
Below Normal (13%)	203,779	203,779	203,779	203,779	204,319
Dry (24%)	204,427	204,427	204,427	204,427	205,319
Critical (15%)	207,187	207,187	207,187	207,187	215,493

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	209,184	209,184	209,184	212,960	209,184
20%	203,238	203,238	203,238	212,960	209,184
30%	203,238	203,238	203,238	212,960	203,238
40%	203,238	203,238	203,238	212,960	203,238
50%	203,238	203,238	203,238	212,960	203,238
60%	203,238	203,238	203,238	212,960	203,238
70%	203,238	203,238	203,238	212,960	203,238
80%	203,238	203,238	203,238	212,960	203,238
90%	203,238	203,238	203,238	209,153	203,238
Long Term					
Full Simulation Period[b]	206,013	205,132	204,251	212,118	205,684
Water Year Types[c]					
Wet (32%)	208,796	206,017	203,238	212,960	203,238
Above Normal (16%)	203,695	203,695	203,695	212,960	203,238
Below Normal (13%)	203,779	203,779	203,779	212,614	204,319
Dry (24%)	204,427	204,427	204,427	212,009	205,319
Critical (15%)	207,187	207,187	207,187	209,104	215,493

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	0	0	0	3,776	0
20%	0	0	0	9,722	0
30%	0	0	0	9,722	0
40%	0	0	0	9,722	0
50%	0	0	0	9,722	0
60%	0	0	0	9,722	0
70%	0	0	0	9,722	0
80%	0	0	0	9,722	0
90%	0	0	0	5,915	0
Long Term					
Full Simulation Period[b]	0	0	0	7,939	0
Water Year Types[c]					
Wet (32%)	0	0	0	9,722	0
Above Normal (16%)	0	0	0	9,722	0
Below Normal (13%)	0	0	0	8,836	0
Dry (24%)	0	0	0	7,581	0
Critical (15%)	0	0	0	1,917	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.9. Total Clear Creek Steelhead/Rainbow Trout Juvenile Rearing WUA

Table C-9-1. Total Clear Creek Steelhead/Rainbow Trout Juvenile Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)					
Statistic	Jul	Aug	Sep	Oct	Nov	Dec
Probability of Exceedance[a]						
10%	249,321	249,321	353,767	421,350	421,350	421,350
20%	249,321	249,321	353,767	421,350	421,350	421,350
30%	249,321	249,321	353,767	421,350	421,350	421,350
40%	249,321	249,321	353,767	421,350	421,350	421,350
50%	249,321	249,321	353,767	421,350	421,350	421,350
60%	249,321	249,321	353,767	421,350	421,350	421,350
70%	249,321	249,321	353,767	421,350	421,350	421,350
80%	249,321	249,321	353,767	421,350	421,350	421,350
90%	249,321	249,321	353,767	353,767	353,767	353,767
Long Term						
Full Simulation Period[b]	249,321	249,321	349,555	397,531	403,987	407,219
Water Year Types[c]						
Wet (32%)	249,321	249,321	353,767	421,350	421,350	421,350
Above Normal (16%)	249,321	249,321	353,767	392,471	395,561	405,754
Below Normal (13%)	249,321	249,321	353,767	415,206	415,206	415,206
Dry (24%)	249,321	249,321	353,767	378,132	397,829	404,454
Critical (15%)	249,321	249,321	324,987	367,536	375,476	375,476

Alternative 1

	Monthly WUA (Feet2)					
Statistic	Jul	Aug	Sep	Oct	Nov	Dec
Probability of Exceedance[a]						
10%	249,321	249,321	353,767	421,350	421,350	421,350
20%	249,321	249,321	353,767	421,350	421,350	421,350
30%	249,321	249,321	353,767	421,350	421,350	421,350
40%	249,321	249,321	353,767	421,350	421,350	421,350
50%	249,321	249,321	353,767	421,350	421,350	421,350
60%	249,321	249,321	353,767	421,350	421,350	421,350
70%	249,321	249,321	353,767	421,350	421,350	421,350
80%	249,321	249,321	353,767	421,350	421,350	421,350
90%	249,321	249,321	353,767	353,767	353,767	353,767
Long Term						
Full Simulation Period[b]	249,321	249,321	349,555	399,868	403,987	407,219
Water Year Types[c]						
Wet (32%)	249,321	249,321	353,767	421,350	421,350	421,350
Above Normal (16%)	249,321	249,321	353,767	392,471	395,561	405,754
Below Normal (13%)	249,321	249,321	353,767	415,206	415,206	415,206
Dry (24%)	249,321	249,321	353,767	387,712	397,829	404,454
Critical (15%)	249,321	249,321	324,987	367,536	375,476	375,476

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)					
Statistic	Jul	Aug	Sep	Oct	Nov	Dec
Probability of Exceedance[a]						
10%	0	0	0	0	0	0
20%	0	0	0	0	0	0
30%	0	0	0	0	0	0
40%	0	0	0	0	0	0
50%	0	0	0	0	0	0
60%	0	0	0	0	0	0
70%	0	0	0	0	0	0
80%	0	0	0	0	0	0
90%	0	0	0	0	0	0
Long Term						
Full Simulation Period[b]	0	0	0	2,337	0	0
Water Year Types[c]						
Wet (32%)	0	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0
Dry (24%)	0	0	0	9,580	0	0
Critical (15%)	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-9-2. Total Clear Creek Steelhead/Rainbow Trout Juvenile Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)					
Statistic	Jul	Aug	Sep	Oct	Nov	Dec
Probability of Exceedance[a]						
10%	249,321	249,321	353,767	421,350	421,350	421,350
20%	249,321	249,321	353,767	421,350	421,350	421,350
30%	249,321	249,321	353,767	421,350	421,350	421,350
40%	249,321	249,321	353,767	421,350	421,350	421,350
50%	249,321	249,321	353,767	421,350	421,350	421,350
60%	249,321	249,321	353,767	421,350	421,350	421,350
70%	249,321	249,321	353,767	421,350	421,350	421,350
80%	249,321	249,321	353,767	421,350	421,350	421,350
90%	249,321	249,321	353,767	353,767	353,767	353,767
Long Term						
Full Simulation Period[b]	249,321	249,321	349,555	397,531	403,987	407,219
Water Year Types[c]						
Wet (32%)	249,321	249,321	353,767	421,350	421,350	421,350
Above Normal (16%)	249,321	249,321	353,767	392,471	395,561	405,754
Below Normal (13%)	249,321	249,321	353,767	415,206	415,206	415,206
Dry (24%)	249,321	249,321	353,767	378,132	397,829	404,454
Critical (15%)	249,321	249,321	324,987	367,536	375,476	375,476

Alternative 3

	Monthly WUA (Feet2)					
Statistic	Jul	Aug	Sep	Oct	Nov	Dec
Probability of Exceedance[a]						
10%	249,321	249,321	353,767	421,350	421,350	421,350
20%	249,321	249,321	353,767	421,350	421,350	421,350
30%	249,321	249,321	353,767	421,350	421,350	421,350
40%	249,321	249,321	353,767	421,350	421,350	421,350
50%	249,321	249,321	353,767	421,350	421,350	421,350
60%	249,321	249,321	353,767	421,350	421,350	421,350
70%	249,321	249,321	353,767	421,350	421,350	421,350
80%	249,321	249,321	353,767	421,350	421,350	421,350
90%	249,321	249,321	353,767	353,767	353,767	353,767
Long Term						
Full Simulation Period[b]	249,321	249,321	349,555	399,868	403,987	407,219
Water Year Types[c]						
Wet (32%)	249,321	249,321	353,767	421,350	421,350	421,350
Above Normal (16%)	249,321	249,321	353,767	392,471	395,561	405,754
Below Normal (13%)	249,321	249,321	353,767	415,206	415,206	415,206
Dry (24%)	249,321	249,321	353,767	387,712	397,829	404,454
Critical (15%)	249,321	249,321	324,987	367,536	375,476	375,476

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)					
Statistic	Jul	Aug	Sep	Oct	Nov	Dec
Probability of Exceedance[a]						
10%	0	0	0	0	0	0
20%	0	0	0	0	0	0
30%	0	0	0	0	0	0
40%	0	0	0	0	0	0
50%	0	0	0	0	0	0
60%	0	0	0	0	0	0
70%	0	0	0	0	0	0
80%	0	0	0	0	0	0
90%	0	0	0	0	0	0
Long Term						
Full Simulation Period[b]	0	0	0	2,337	0	0
Water Year Types[c]						
Wet (32%)	0	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0
Dry (24%)	0	0	0	9,580	0	0
Critical (15%)	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-9-3. Total Clear Creek Steelhead/Rainbow Trout Juvenile Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)					
Statistic	Jul	Aug	Sep	Oct	Nov	Dec
Probability of Exceedance[a]						
10%	249,321	249,321	353,767	421,350	421,350	421,350
20%	249,321	249,321	353,767	421,350	421,350	421,350
30%	249,321	249,321	353,767	421,350	421,350	421,350
40%	249,321	249,321	353,767	421,350	421,350	421,350
50%	249,321	249,321	353,767	421,350	421,350	421,350
60%	249,321	249,321	353,767	421,350	421,350	421,350
70%	249,321	249,321	353,767	421,350	421,350	421,350
80%	249,321	249,321	353,767	421,350	421,350	421,350
90%	249,321	249,321	353,767	353,767	353,767	353,767
Long Term						
Full Simulation Period[b]	249,321	249,321	349,555	397,531	403,987	407,219
Water Year Types[c]						
Wet (32%)	249,321	249,321	353,767	421,350	421,350	421,350
Above Normal (16%)	249,321	249,321	353,767	392,471	395,561	405,754
Below Normal (13%)	249,321	249,321	353,767	415,206	415,206	415,206
Dry (24%)	249,321	249,321	353,767	378,132	397,829	404,454
Critical (15%)	249,321	249,321	324,987	367,536	375,476	375,476

Alternative 5

	Monthly WUA (Feet2)					
Statistic	Jul	Aug	Sep	Oct	Nov	Dec
Probability of Exceedance[a]						
10%	249,321	249,321	353,767	421,350	421,350	421,350
20%	249,321	249,321	353,767	421,350	421,350	421,350
30%	249,321	249,321	353,767	421,350	421,350	421,350
40%	249,321	249,321	353,767	421,350	421,350	421,350
50%	249,321	249,321	353,767	421,350	421,350	421,350
60%	249,321	249,321	353,767	421,350	421,350	421,350
70%	249,321	249,321	353,767	421,350	421,350	421,350
80%	249,321	249,321	353,767	421,350	421,350	421,350
90%	249,321	249,321	353,767	353,767	353,767	353,767
Long Term						
Full Simulation Period[b]	249,321	249,354	349,555	399,466	403,987	407,219
Water Year Types[c]						
Wet (32%)	249,321	249,321	353,767	421,350	421,350	421,350
Above Normal (16%)	249,321	249,321	353,767	392,471	395,561	405,754
Below Normal (13%)	249,321	249,321	353,767	415,206	415,206	415,206
Dry (24%)	249,321	249,321	353,767	386,066	397,829	404,454
Critical (15%)	249,321	249,542	324,987	367,536	375,476	375,476

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)					
Statistic	Jul	Aug	Sep	Oct	Nov	Dec
Probability of Exceedance[a]						
10%	0	0	0	0	0	0
20%	0	0	0	0	0	0
30%	0	0	0	0	0	0
40%	0	0	0	0	0	0
50%	0	0	0	0	0	0
60%	0	0	0	0	0	0
70%	0	0	0	0	0	0
80%	0	0	0	0	0	0
90%	0	0	0	0	0	0
Long Term						
Full Simulation Period[b]	0	32	0	1,935	0	0
Water Year Types[c]						
Wet (32%)	0	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0
Dry (24%)	0	0	0	7,934	0	0
Critical (15%)	0	221	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-9-4. Total Clear Creek Steelhead/Rainbow Trout Juvenile Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)					
Statistic	Jul	Aug	Sep	Oct	Nov	Dec
Probability of Exceedance[a]						
10%	249,321	249,321	353,767	421,350	421,350	421,350
20%	249,321	249,321	353,767	421,350	421,350	421,350
30%	249,321	249,321	353,767	421,350	421,350	421,350
40%	249,321	249,321	353,767	421,350	421,350	421,350
50%	249,321	249,321	353,767	421,350	421,350	421,350
60%	249,321	249,321	353,767	421,350	421,350	421,350
70%	249,321	249,321	353,767	421,350	421,350	421,350
80%	249,321	249,321	353,767	421,350	421,350	421,350
90%	249,321	249,321	353,767	353,767	353,767	353,767
Long Term						
Full Simulation Period[b]	249,321	249,321	349,555	399,868	403,987	407,219
Water Year Types[c]						
Wet (32%)	249,321	249,321	353,767	421,350	421,350	421,350
Above Normal (16%)	249,321	249,321	353,767	392,471	395,561	405,754
Below Normal (13%)	249,321	249,321	353,767	415,206	415,206	415,206
Dry (24%)	249,321	249,321	353,767	387,712	397,829	404,454
Critical (15%)	249,321	249,321	324,987	367,536	375,476	375,476

No Action Alternative

	Monthly WUA (Feet2)					
Statistic	Jul	Aug	Sep	Oct	Nov	Dec
Probability of Exceedance[a]						
10%	249,321	249,321	353,767	421,350	421,350	421,350
20%	249,321	249,321	353,767	421,350	421,350	421,350
30%	249,321	249,321	353,767	421,350	421,350	421,350
40%	249,321	249,321	353,767	421,350	421,350	421,350
50%	249,321	249,321	353,767	421,350	421,350	421,350
60%	249,321	249,321	353,767	421,350	421,350	421,350
70%	249,321	249,321	353,767	421,350	421,350	421,350
80%	249,321	249,321	353,767	421,350	421,350	421,350
90%	249,321	249,321	353,767	353,767	353,767	353,767
Long Term						
Full Simulation Period[b]	249,321	249,321	349,555	397,531	403,987	407,219
Water Year Types[c]						
Wet (32%)	249,321	249,321	353,767	421,350	421,350	421,350
Above Normal (16%)	249,321	249,321	353,767	392,471	395,561	405,754
Below Normal (13%)	249,321	249,321	353,767	415,206	415,206	415,206
Dry (24%)	249,321	249,321	353,767	378,132	397,829	404,454
Critical (15%)	249,321	249,321	324,987	367,536	375,476	375,476

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)					
Statistic	Jul	Aug	Sep	Oct	Nov	Dec
Probability of Exceedance[a]						
10%	0	0	0	0	0	0
20%	0	0	0	0	0	0
30%	0	0	0	0	0	0
40%	0	0	0	0	0	0
50%	0	0	0	0	0	0
60%	0	0	0	0	0	0
70%	0	0	0	0	0	0
80%	0	0	0	0	0	0
90%	0	0	0	0	0	0
Long Term						
Full Simulation Period[b]	0	0	0	-2,337	0	0
Water Year Types[c]						
Wet (32%)	0	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0
Dry (24%)	0	0	0	-9,580	0	0
Critical (15%)	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-9-5. Total Clear Creek Steelhead/Rainbow Trout Juvenile Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)					
Statistic	Jul	Aug	Sep	Oct	Nov	Dec
Probability of Exceedance[a]						
10%	249,321	249,321	353,767	421,350	421,350	421,350
20%	249,321	249,321	353,767	421,350	421,350	421,350
30%	249,321	249,321	353,767	421,350	421,350	421,350
40%	249,321	249,321	353,767	421,350	421,350	421,350
50%	249,321	249,321	353,767	421,350	421,350	421,350
60%	249,321	249,321	353,767	421,350	421,350	421,350
70%	249,321	249,321	353,767	421,350	421,350	421,350
80%	249,321	249,321	353,767	421,350	421,350	421,350
90%	249,321	249,321	353,767	353,767	353,767	353,767
Long Term						
Full Simulation Period[b]	249,321	249,321	349,555	399,868	403,987	407,219
Water Year Types[c]						
Wet (32%)	249,321	249,321	353,767	421,350	421,350	421,350
Above Normal (16%)	249,321	249,321	353,767	392,471	395,561	405,754
Below Normal (13%)	249,321	249,321	353,767	415,206	415,206	415,206
Dry (24%)	249,321	249,321	353,767	387,712	397,829	404,454
Critical (15%)	249,321	249,321	324,987	367,536	375,476	375,476

Alternative 3

	Monthly WUA (Feet2)					
Statistic	Jul	Aug	Sep	Oct	Nov	Dec
Probability of Exceedance[a]						
10%	249,321	249,321	353,767	421,350	421,350	421,350
20%	249,321	249,321	353,767	421,350	421,350	421,350
30%	249,321	249,321	353,767	421,350	421,350	421,350
40%	249,321	249,321	353,767	421,350	421,350	421,350
50%	249,321	249,321	353,767	421,350	421,350	421,350
60%	249,321	249,321	353,767	421,350	421,350	421,350
70%	249,321	249,321	353,767	421,350	421,350	421,350
80%	249,321	249,321	353,767	421,350	421,350	421,350
90%	249,321	249,321	353,767	353,767	353,767	353,767
Long Term						
Full Simulation Period[b]	249,321	249,321	349,555	399,868	403,987	407,219
Water Year Types[c]						
Wet (32%)	249,321	249,321	353,767	421,350	421,350	421,350
Above Normal (16%)	249,321	249,321	353,767	392,471	395,561	405,754
Below Normal (13%)	249,321	249,321	353,767	415,206	415,206	415,206
Dry (24%)	249,321	249,321	353,767	387,712	397,829	404,454
Critical (15%)	249,321	249,321	324,987	367,536	375,476	375,476

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)					
Statistic	Jul	Aug	Sep	Oct	Nov	Dec
Probability of Exceedance[a]						
10%	0	0	0	0	0	0
20%	0	0	0	0	0	0
30%	0	0	0	0	0	0
40%	0	0	0	0	0	0
50%	0	0	0	0	0	0
60%	0	0	0	0	0	0
70%	0	0	0	0	0	0
80%	0	0	0	0	0	0
90%	0	0	0	0	0	0
Long Term						
Full Simulation Period[b]	0	0	0	0	0	0
Water Year Types[c]						
Wet (32%)	0	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0
Dry (24%)	0	0	0	0	0	0
Critical (15%)	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-9-6. Total Clear Creek Steelhead/Rainbow Trout Juvenile Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)					
Statistic	Jul	Aug	Sep	Oct	Nov	Dec
Probability of Exceedance[a]						
10%	249,321	249,321	353,767	421,350	421,350	421,350
20%	249,321	249,321	353,767	421,350	421,350	421,350
30%	249,321	249,321	353,767	421,350	421,350	421,350
40%	249,321	249,321	353,767	421,350	421,350	421,350
50%	249,321	249,321	353,767	421,350	421,350	421,350
60%	249,321	249,321	353,767	421,350	421,350	421,350
70%	249,321	249,321	353,767	421,350	421,350	421,350
80%	249,321	249,321	353,767	421,350	421,350	421,350
90%	249,321	249,321	353,767	353,767	353,767	353,767
Long Term						
Full Simulation Period[b]	249,321	249,321	349,555	399,868	403,987	407,219
Water Year Types[c]						
Wet (32%)	249,321	249,321	353,767	421,350	421,350	421,350
Above Normal (16%)	249,321	249,321	353,767	392,471	395,561	405,754
Below Normal (13%)	249,321	249,321	353,767	415,206	415,206	415,206
Dry (24%)	249,321	249,321	353,767	387,712	397,829	404,454
Critical (15%)	249,321	249,321	324,987	367,536	375,476	375,476

Alternative 5

	Monthly WUA (Feet2)					
Statistic	Jul	Aug	Sep	Oct	Nov	Dec
Probability of Exceedance[a]						
10%	249,321	249,321	353,767	421,350	421,350	421,350
20%	249,321	249,321	353,767	421,350	421,350	421,350
30%	249,321	249,321	353,767	421,350	421,350	421,350
40%	249,321	249,321	353,767	421,350	421,350	421,350
50%	249,321	249,321	353,767	421,350	421,350	421,350
60%	249,321	249,321	353,767	421,350	421,350	421,350
70%	249,321	249,321	353,767	421,350	421,350	421,350
80%	249,321	249,321	353,767	421,350	421,350	421,350
90%	249,321	249,321	353,767	353,767	353,767	353,767
Long Term						
Full Simulation Period[b]	249,321	249,354	349,555	399,466	403,987	407,219
Water Year Types[c]						
Wet (32%)	249,321	249,321	353,767	421,350	421,350	421,350
Above Normal (16%)	249,321	249,321	353,767	392,471	395,561	405,754
Below Normal (13%)	249,321	249,321	353,767	415,206	415,206	415,206
Dry (24%)	249,321	249,321	353,767	386,066	397,829	404,454
Critical (15%)	249,321	249,542	324,987	367,536	375,476	375,476

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)					
Statistic	Jul	Aug	Sep	Oct	Nov	Dec
Probability of Exceedance[a]						
10%	0	0	0	0	0	0
20%	0	0	0	0	0	0
30%	0	0	0	0	0	0
40%	0	0	0	0	0	0
50%	0	0	0	0	0	0
60%	0	0	0	0	0	0
70%	0	0	0	0	0	0
80%	0	0	0	0	0	0
90%	0	0	0	0	0	0
Long Term						
Full Simulation Period[b]	0	32	0	-401	0	0
Water Year Types[c]						
Wet (32%)	0	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0
Dry (24%)	0	0	0	-1,646	0	0
Critical (15%)	0	221	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.10. Sacramento River Battle Creek to Deer Creek Fall-run Spawning WUA

Table C-10-1. Sacramento River Battle Creek to Deer Creek Fall-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	2,611,760	2,611,057	2,612,631	2,612,797
20%	2,600,910	2,599,556	2,544,749	2,589,528
30%	2,581,802	2,577,781	2,470,196	2,545,194
40%	2,559,436	2,524,364	2,399,009	2,498,496
50%	2,464,136	2,469,472	2,240,547	2,431,325
60%	2,074,148	2,362,473	1,937,765	2,177,929
70%	1,759,375	2,239,138	1,726,837	1,647,019
80%	1,312,640	2,159,758	1,469,982	752,125
90%	948,053	2,004,975	1,274,759	401,738
Long Term				
Full Simulation Period[b]	2,061,189	2,370,068	2,033,170	1,914,685
Water Year Types[c]				
Wet (32%)	1,244,507	2,256,115	1,749,171	1,088,491
Above Normal (16%)	2,031,473	2,386,839	1,953,380	1,797,287
Below Normal (13%)	2,534,356	2,340,807	2,010,650	2,442,865
Dry (24%)	2,568,048	2,429,377	2,212,340	2,452,807
Critical (15%)	2,584,359	2,526,770	2,456,964	2,450,916

Alternative 1

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	2,606,453	2,610,923	2,613,004	2,615,120
20%	2,598,686	2,607,118	2,590,324	2,606,353
30%	2,590,641	2,590,380	2,540,705	2,581,186
40%	2,581,703	2,552,232	2,522,164	2,523,587
50%	2,568,920	2,488,692	2,471,020	2,429,050
60%	2,544,110	2,423,341	2,415,878	2,114,265
70%	2,511,568	2,198,680	2,348,647	1,522,077
80%	2,468,817	2,149,445	2,135,419	649,981
90%	2,037,416	2,077,807	1,651,010	310,774
Long Term				
Full Simulation Period[b]	2,453,532	2,391,156	2,277,239	1,889,000
Water Year Types[c]				
Wet (32%)	2,263,522	2,319,171	2,072,824	1,004,115
Above Normal (16%)	2,482,326	2,412,105	2,220,931	1,815,000
Below Normal (13%)	2,557,385	2,339,463	2,208,996	2,424,318
Dry (24%)	2,557,171	2,404,188	2,483,729	2,453,917
Critical (15%)	2,566,099	2,550,090	2,499,547	2,454,183

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	**-5,308**	**-134**	373	2,323
20%	**-2,224**	7,563	45,576	16,826
30%	8,839	12,598	70,509	35,992
40%	22,267	27,867	123,154	25,091
50%	104,785	19,220	230,473	**-2,275**
60%	469,961	60,867	478,112	**-63,664**
70%	752,193	**-40,458**	621,810	**-124,942**
80%	1,156,177	**-10,312**	665,437	**-102,144**
90%	1,089,363	72,832	376,251	**-90,964**
Long Term				
Full Simulation Period[b]	392,343	21,088	244,070	**-25,685**
Water Year Types[c]				
Wet (32%)	1,019,014	63,056	323,653	**-84,376**
Above Normal (16%)	450,853	25,266	267,551	17,713
Below Normal (13%)	23,029	**-1,344**	198,346	**-18,548**
Dry (24%)	**-10,877**	**-25,189**	271,389	1,110
Critical (15%)	**-18,261**	23,320	42,583	3,267

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-10-2. Sacramento River Battle Creek to Deer Creek Fall-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	2,611,760	2,611,057	2,612,631	2,612,797
20%	2,600,910	2,599,556	2,544,749	2,589,528
30%	2,581,802	2,577,781	2,470,196	2,545,194
40%	2,559,436	2,524,364	2,399,009	2,498,496
50%	2,464,136	2,469,472	2,240,547	2,431,325
60%	2,074,148	2,362,473	1,937,765	2,177,929
70%	1,759,375	2,239,138	1,726,837	1,647,019
80%	1,312,640	2,159,758	1,469,982	752,125
90%	948,053	2,004,975	1,274,759	401,738
Long Term				
Full Simulation Period[b]	2,061,189	2,370,068	2,033,170	1,914,685
Water Year Types[c]				
Wet (32%)	1,244,507	2,256,115	1,749,171	1,088,491
Above Normal (16%)	2,031,473	2,386,839	1,953,380	1,797,287
Below Normal (13%)	2,534,356	2,340,807	2,010,650	2,442,865
Dry (24%)	2,568,048	2,429,377	2,212,340	2,452,807
Critical (15%)	2,584,359	2,526,770	2,456,964	2,450,916

Alternative 3

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	2,610,761	2,611,696	2,613,329	2,615,189
20%	2,605,860	2,608,507	2,597,800	2,597,011
30%	2,594,432	2,590,731	2,559,776	2,574,680
40%	2,575,290	2,563,650	2,536,506	2,498,042
50%	2,560,249	2,498,190	2,464,905	2,429,136
60%	2,516,696	2,350,599	2,425,645	2,114,277
70%	2,467,821	2,244,905	2,344,898	1,689,342
80%	2,260,206	2,149,050	2,185,503	596,021
90%	2,071,507	2,050,347	1,540,280	310,571
Long Term				
Full Simulation Period[b]	2,418,831	2,385,202	2,288,411	1,894,223
Water Year Types[c]				
Wet (32%)	2,233,398	2,330,886	2,080,687	1,020,249
Above Normal (16%)	2,488,512	2,398,918	2,211,994	1,836,432
Below Normal (13%)	2,328,080	2,356,349	2,250,946	2,425,247
Dry (24%)	2,574,770	2,356,076	2,477,850	2,440,175
Critical (15%)	2,568,402	2,563,018	2,539,877	2,453,750

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	**-999**	639	699	2,392
20%	4,950	8,952	53,051	7,483
30%	12,630	12,949	89,580	29,487
40%	15,854	39,286	137,497	**-453**
50%	96,114	28,718	224,358	**-2,189**
60%	442,548	**-11,874**	487,880	**-63,652**
70%	708,446	5,767	618,060	42,322
80%	947,565	**-10,708**	715,521	**-156,104**
90%	1,123,455	45,372	265,521	**-91,166**
Long Term				
Full Simulation Period[b]	357,641	15,134	255,241	**-20,462**
Water Year Types[c]				
Wet (32%)	988,891	74,771	331,515	**-68,242**
Above Normal (16%)	457,039	12,079	258,615	39,145
Below Normal (13%)	**-206,276**	15,542	240,296	**-17,618**
Dry (24%)	6,722	**-73,301**	265,510	**-12,632**
Critical (15%)	**-15,957**	36,248	82,913	2,835

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-10-3. Sacramento River Battle Creek to Deer Creek Fall-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	2,611,760	2,611,057	2,612,631	2,612,797
20%	2,600,910	2,599,556	2,544,749	2,589,528
30%	2,581,802	2,577,781	2,470,196	2,545,194
40%	2,559,436	2,524,364	2,399,009	2,498,496
50%	2,464,136	2,469,472	2,240,547	2,431,325
60%	2,074,148	2,362,473	1,937,765	2,177,929
70%	1,759,375	2,239,138	1,726,837	1,647,019
80%	1,312,640	2,159,758	1,469,982	752,125
90%	948,053	2,004,975	1,274,759	401,738
Long Term				
Full Simulation Period[b]	2,061,189	2,370,068	2,033,170	1,914,685
Water Year Types[c]				
Wet (32%)	1,244,507	2,256,115	1,749,171	1,088,491
Above Normal (16%)	2,031,473	2,386,839	1,953,380	1,797,287
Below Normal (13%)	2,534,356	2,340,807	2,010,650	2,442,865
Dry (24%)	2,568,048	2,429,377	2,212,340	2,452,807
Critical (15%)	2,584,359	2,526,770	2,456,964	2,450,916

Alternative 5

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	2,611,931	2,609,252	2,613,648	2,612,701
20%	2,607,848	2,599,478	2,548,586	2,589,573
30%	2,589,521	2,577,154	2,472,212	2,546,403
40%	2,572,950	2,530,355	2,394,587	2,508,878
50%	2,473,102	2,466,248	2,237,779	2,430,966
60%	2,098,873	2,353,753	1,900,885	2,177,965
70%	1,776,211	2,248,644	1,721,923	1,646,356
80%	1,312,108	2,161,981	1,478,431	755,029
90%	949,948	1,989,000	1,277,028	418,307
Long Term				
Full Simulation Period[b]	2,068,256	2,374,403	2,031,675	1,916,401
Water Year Types[c]				
Wet (32%)	1,250,456	2,271,658	1,734,787	1,088,118
Above Normal (16%)	2,047,769	2,375,225	1,958,032	1,796,068
Below Normal (13%)	2,524,203	2,343,624	2,012,371	2,447,206
Dry (24%)	2,581,652	2,435,460	2,217,886	2,454,150
Critical (15%)	2,588,738	2,522,580	2,462,055	2,458,554

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	170	**-1,805**	1,018	**-96**
20%	6,938	**-78**	3,837	45
30%	7,719	**-628**	2,015	1,209
40%	13,515	5,991	**-4,422**	10,383
50%	8,966	**-3,224**	**-2,768**	**-359**
60%	24,725	**-8,721**	**-36,881**	36
70%	16,836	9,506	**-4,914**	**-664**
80%	**-532**	2,223	8,449	2,904
90%	1,896	**-15,974**	2,268	16,570
Long Term				
Full Simulation Period[b]	7,066	4,335	**-1,495**	1,716
Water Year Types[c]				
Wet (32%)	5,949	15,543	**-14,384**	**-373**
Above Normal (16%)	16,296	**-11,614**	4,652	**-1,220**
Below Normal (13%)	**-10,153**	2,817	1,721	4,341
Dry (24%)	13,604	6,083	5,547	1,343
Critical (15%)	4,379	**-4,190**	5,091	7,638

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-10-4. Sacramento River Battle Creek to Deer Creek Fall-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	2,606,453	2,610,923	2,613,004	2,615,120
20%	2,598,686	2,607,118	2,590,324	2,606,353
30%	2,590,641	2,590,380	2,540,705	2,581,186
40%	2,581,703	2,552,232	2,522,164	2,523,587
50%	2,568,920	2,488,692	2,471,020	2,429,050
60%	2,544,110	2,423,341	2,415,878	2,114,265
70%	2,511,568	2,198,680	2,348,647	1,522,077
80%	2,468,817	2,149,445	2,135,419	649,981
90%	2,037,416	2,077,807	1,651,010	310,774
Long Term				
Full Simulation Period[b]	2,453,532	2,391,156	2,277,239	1,889,000
Water Year Types[c]				
Wet (32%)	2,263,522	2,319,171	2,072,824	1,004,115
Above Normal (16%)	2,482,326	2,412,105	2,220,931	1,815,000
Below Normal (13%)	2,557,385	2,339,463	2,208,996	2,424,318
Dry (24%)	2,557,171	2,404,188	2,483,729	2,453,917
Critical (15%)	2,566,099	2,550,090	2,499,547	2,454,183

No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	2,611,760	2,611,057	2,612,631	2,612,797
20%	2,600,910	2,599,556	2,544,749	2,589,528
30%	2,581,802	2,577,781	2,470,196	2,545,194
40%	2,559,436	2,524,364	2,399,009	2,498,496
50%	2,464,136	2,469,472	2,240,547	2,431,325
60%	2,074,148	2,362,473	1,937,765	2,177,929
70%	1,759,375	2,239,138	1,726,837	1,647,019
80%	1,312,640	2,159,758	1,469,982	752,125
90%	948,053	2,004,975	1,274,759	401,738
Long Term				
Full Simulation Period[b]	2,061,189	2,370,068	2,033,170	1,914,685
Water Year Types[c]				
Wet (32%)	1,244,507	2,256,115	1,749,171	1,088,491
Above Normal (16%)	2,031,473	2,386,839	1,953,380	1,797,287
Below Normal (13%)	2,534,356	2,340,807	2,010,650	2,442,865
Dry (24%)	2,568,048	2,429,377	2,212,340	2,452,807
Critical (15%)	2,584,359	2,526,770	2,456,964	2,450,916

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	5,308	134	**-373**	**-2,323**
20%	2,224	**-7,563**	**-45,576**	**-16,826**
30%	**-8,839**	**-12,598**	**-70,509**	**-35,992**
40%	**-22,267**	**-27,867**	**-123,154**	**-25,091**
50%	**-104,785**	**-19,220**	**-230,473**	2,275
60%	**-469,961**	**-60,867**	**-478,112**	63,664
70%	**-752,193**	40,458	**-621,810**	124,942
80%	**-1,156,177**	10,312	**-665,437**	102,144
90%	**-1,089,363**	**-72,832**	**-376,251**	90,964
Long Term				
Full Simulation Period[b]	**-392,343**	**-21,088**	**-244,070**	25,685
Water Year Types[c]				
Wet (32%)	**-1,019,014**	**-63,056**	**-323,653**	84,376
Above Normal (16%)	**-450,853**	**-25,266**	**-267,551**	**-17,713**
Below Normal (13%)	**-23,029**	1,344	**-198,346**	18,548
Dry (24%)	10,877	25,189	**-271,389**	**-1,110**
Critical (15%)	18,261	**-23,320**	**-42,583**	**-3,267**

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-10-5. Sacramento River Battle Creek to Deer Creek Fall-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	2,606,453	2,610,923	2,613,004	2,615,120
20%	2,598,686	2,607,118	2,590,324	2,606,353
30%	2,590,641	2,590,380	2,540,705	2,581,186
40%	2,581,703	2,552,232	2,522,164	2,523,587
50%	2,568,920	2,488,692	2,471,020	2,429,050
60%	2,544,110	2,423,341	2,415,878	2,114,265
70%	2,511,568	2,198,680	2,348,647	1,522,077
80%	2,468,817	2,149,445	2,135,419	649,981
90%	2,037,416	2,077,807	1,651,010	310,774
Long Term				
Full Simulation Period[b]	2,453,532	2,391,156	2,277,239	1,889,000
Water Year Types[c]				
Wet (32%)	2,263,522	2,319,171	2,072,824	1,004,115
Above Normal (16%)	2,482,326	2,412,105	2,220,931	1,815,000
Below Normal (13%)	2,557,385	2,339,463	2,208,996	2,424,318
Dry (24%)	2,557,171	2,404,188	2,483,729	2,453,917
Critical (15%)	2,566,099	2,550,090	2,499,547	2,454,183

Alternative 3

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	2,610,761	2,611,696	2,613,329	2,615,189
20%	2,605,860	2,608,507	2,597,800	2,597,011
30%	2,594,432	2,590,731	2,559,776	2,574,680
40%	2,575,290	2,563,650	2,536,506	2,498,042
50%	2,560,249	2,498,190	2,464,905	2,429,136
60%	2,516,696	2,350,599	2,425,645	2,114,277
70%	2,467,821	2,244,905	2,344,898	1,689,342
80%	2,260,206	2,149,050	2,185,503	596,021
90%	2,071,507	2,050,347	1,540,280	310,571
Long Term				
Full Simulation Period[b]	2,418,831	2,385,202	2,288,411	1,894,223
Water Year Types[c]				
Wet (32%)	2,233,398	2,330,886	2,080,687	1,020,249
Above Normal (16%)	2,488,512	2,398,918	2,211,994	1,836,432
Below Normal (13%)	2,328,080	2,356,349	2,250,946	2,425,247
Dry (24%)	2,574,770	2,356,076	2,477,850	2,440,175
Critical (15%)	2,568,402	2,563,018	2,539,877	2,453,750

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	4,308	773	326	69
20%	7,174	1,389	7,475	**-9,343**
30%	3,791	351	19,071	**-6,505**
40%	**-6,413**	11,418	14,343	**-25,545**
50%	**-8,671**	9,498	**-6,115**	86
60%	**-27,413**	**-72,742**	9,768	12
70%	**-43,748**	46,225	**-3,750**	167,265
80%	**-208,611**	**-395**	50,083	**-53,960**
90%	34,091	**-27,459**	**-110,730**	**-202**
Long Term				
Full Simulation Period[b]	**-34,702**	**-5,954**	11,172	5,223
Water Year Types[c]				
Wet (32%)	**-30,124**	11,715	7,863	16,134
Above Normal (16%)	6,186	**-13,187**	**-8,936**	21,431
Below Normal (13%)	**-229,305**	16,886	41,950	930
Dry (24%)	17,599	**-48,112**	**-5,880**	**-13,742**
Critical (15%)	2,304	12,928	40,330	**-433**

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-10-6. Sacramento River Battle Creek to Deer Creek Fall-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	2,606,453	2,610,923	2,613,004	2,615,120
20%	2,598,686	2,607,118	2,590,324	2,606,353
30%	2,590,641	2,590,380	2,540,705	2,581,186
40%	2,581,703	2,552,232	2,522,164	2,523,587
50%	2,568,920	2,488,692	2,471,020	2,429,050
60%	2,544,110	2,423,341	2,415,878	2,114,265
70%	2,511,568	2,198,680	2,348,647	1,522,077
80%	2,468,817	2,149,445	2,135,419	649,981
90%	2,037,416	2,077,807	1,651,010	310,774
Long Term				
Full Simulation Period[b]	2,453,532	2,391,156	2,277,239	1,889,000
Water Year Types[c]				
Wet (32%)	2,263,522	2,319,171	2,072,824	1,004,115
Above Normal (16%)	2,482,326	2,412,105	2,220,931	1,815,000
Below Normal (13%)	2,557,385	2,339,463	2,208,996	2,424,318
Dry (24%)	2,557,171	2,404,188	2,483,729	2,453,917
Critical (15%)	2,566,099	2,550,090	2,499,547	2,454,183

Alternative 5

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	2,611,931	2,609,252	2,613,648	2,612,701
20%	2,607,848	2,599,478	2,548,586	2,589,573
30%	2,589,521	2,577,154	2,472,212	2,546,403
40%	2,572,950	2,530,355	2,394,587	2,508,878
50%	2,473,102	2,466,248	2,237,779	2,430,966
60%	2,098,873	2,353,753	1,900,885	2,177,965
70%	1,776,211	2,248,644	1,721,923	1,646,356
80%	1,312,108	2,161,981	1,478,431	755,029
90%	949,948	1,989,000	1,277,028	418,307
Long Term				
Full Simulation Period[b]	2,068,256	2,374,403	2,031,675	1,916,401
Water Year Types[c]				
Wet (32%)	1,250,456	2,271,658	1,734,787	1,088,118
Above Normal (16%)	2,047,769	2,375,225	1,958,032	1,796,068
Below Normal (13%)	2,524,203	2,343,624	2,012,371	2,447,206
Dry (24%)	2,581,652	2,435,460	2,217,886	2,454,150
Critical (15%)	2,588,738	2,522,580	2,462,055	2,458,554

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	5,478	-1,672	645	-2,419
20%	9,162	-7,640	-41,738	-16,781
30%	-1,120	-13,226	-68,493	-34,783
40%	-8,753	-21,877	-127,576	-14,709
50%	-95,819	-22,444	-233,241	1,916
60%	-445,236	-69,588	-514,993	63,700
70%	-735,357	49,964	-626,724	124,278
80%	-1,156,709	12,535	-656,989	105,048
90%	-1,087,468	-88,806	-373,982	107,534
Long Term				
Full Simulation Period[b]	-385,276	-16,752	-245,564	27,401
Water Year Types[c]				
Wet (32%)	-1,013,066	-47,514	-338,037	84,003
Above Normal (16%)	-434,557	-36,880	-262,899	-18,933
Below Normal (13%)	-33,182	4,162	-196,625	22,889
Dry (24%)	24,481	31,272	-265,843	233
Critical (15%)	22,640	-27,510	-37,492	4,371

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.11. Sacramento River Keswick to Battle Creek Fall-run Spawning WUA

Table C-11-1. Sacramento River Keswick to Battle Creek Fall-run Spawning WUA, Monthly WUA

No Action Alternative

Statistic	Monthly WUA (Feet2)			
	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	1,074,933	1,071,766	1,084,531	1,090,813
20%	1,068,693	1,055,003	1,083,385	1,086,203
30%	1,059,032	1,028,294	1,064,343	1,084,597
40%	1,022,534	981,340	1,028,071	1,084,031
50%	946,852	935,007	938,966	1,083,095
60%	679,708	857,031	826,749	1,071,937
70%	547,205	804,100	693,902	994,128
80%	415,717	737,992	541,879	612,062
90%	288,927	684,923	443,183	241,531
Long Term				
Full Simulation Period[b]	775,472	901,077	838,248	894,774
Water Year Types[c]				
Wet (32%)	397,164	848,767	756,753	608,821
Above Normal (16%)	676,556	915,921	815,092	869,943
Below Normal (13%)	999,599	866,710	827,549	1,077,935
Dry (24%)	1,041,977	916,695	874,647	1,074,316
Critical (15%)	1,052,675	1,003,809	989,051	1,074,106

Alternative 1

Statistic	Monthly WUA (Feet2)			
	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	1,075,063	1,084,537	1,088,587	1,090,562
20%	1,070,202	1,070,164	1,084,595	1,086,381
30%	1,061,602	1,039,011	1,077,634	1,085,311
40%	1,024,656	1,007,580	1,069,954	1,084,228
50%	1,010,066	958,002	1,034,898	1,082,736
60%	984,835	915,882	1,006,817	1,073,877
70%	955,282	792,903	963,392	922,017
80%	921,879	736,193	853,474	440,476
90%	666,878	689,992	766,031	176,647
Long Term				
Full Simulation Period[b]	954,392	915,813	964,036	870,201
Water Year Types[c]				
Wet (32%)	838,409	885,485	919,516	516,092
Above Normal (16%)	946,747	928,105	929,572	906,878
Below Normal (13%)	1,002,301	871,146	939,385	1,070,070
Dry (24%)	1,033,166	906,014	1,025,717	1,076,055
Critical (15%)	1,038,764	1,025,479	1,017,627	1,071,403

Alternative 1 minus No Action Alternative

Statistic	Monthly WUA (Feet2)			
	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	130	12,771	4,056	**-250**
20%	1,509	15,160	1,210	178
30%	2,570	10,717	13,292	714
40%	2,122	26,240	41,883	197
50%	63,215	22,995	95,932	**-360**
60%	305,127	58,852	180,068	1,940
70%	408,077	**-11,197**	269,489	**-72,111**
80%	506,162	**-1,800**	311,594	**-171,587**
90%	377,950	5,069	322,847	**-64,884**
Long Term				
Full Simulation Period[b]	178,920	14,735	125,788	**-24,573**
Water Year Types[c]				
Wet (32%)	441,244	36,718	162,763	**-92,729**
Above Normal (16%)	270,191	12,185	114,481	36,935
Below Normal (13%)	2,702	4,436	111,836	**-7,866**
Dry (24%)	**-8,811**	**-10,681**	151,070	1,738
Critical (15%)	**-13,911**	21,670	28,576	**-2,703**

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-11-2. Sacramento River Keswick to Battle Creek Fall-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	1,074,933	1,071,766	1,084,531	1,090,813
20%	1,068,693	1,055,003	1,083,385	1,086,203
30%	1,059,032	1,028,294	1,064,343	1,084,597
40%	1,022,534	981,340	1,028,071	1,084,031
50%	946,852	935,007	938,966	1,083,095
60%	679,708	857,031	826,749	1,071,937
70%	547,205	804,100	693,902	994,128
80%	415,717	737,992	541,879	612,062
90%	288,927	684,923	443,183	241,531
Long Term				
Full Simulation Period[b]	775,472	901,077	838,248	894,774
Water Year Types[c]				
Wet (32%)	397,164	848,767	756,753	608,821
Above Normal (16%)	676,556	915,921	815,092	869,943
Below Normal (13%)	999,599	866,710	827,549	1,077,935
Dry (24%)	1,041,977	916,695	874,647	1,074,316
Critical (15%)	1,052,675	1,003,809	989,051	1,074,106

Alternative 3

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	1,075,087	1,078,796	1,086,362	1,091,106
20%	1,067,969	1,062,764	1,084,474	1,086,289
30%	1,050,075	1,033,900	1,079,992	1,084,965
40%	1,029,594	1,007,376	1,071,104	1,084,236
50%	999,853	962,210	1,045,663	1,082,321
60%	967,954	884,014	1,018,409	1,065,798
70%	928,132	807,938	964,944	940,990
80%	806,964	724,973	895,430	431,219
90%	691,766	684,537	763,489	175,746
Long Term				
Full Simulation Period[b]	932,453	909,513	970,527	869,416
Water Year Types[c]				
Wet (32%)	818,164	890,447	924,853	519,907
Above Normal (16%)	949,036	918,229	919,388	904,151
Below Normal (13%)	870,415	880,602	965,796	1,070,366
Dry (24%)	1,041,141	878,291	1,022,832	1,070,050
Critical (15%)	1,037,833	1,019,916	1,042,050	1,070,462

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	154	7,030	1,830	293
20%	**-724**	7,761	1,089	86
30%	**-8,957**	5,606	15,649	369
40%	7,061	26,036	43,033	205
50%	53,001	27,203	106,698	**-775**
60%	288,246	26,983	191,660	**-6,139**
70%	380,927	3,838	271,041	**-53,138**
80%	391,247	**-13,019**	353,551	**-180,843**
90%	402,839	**-387**	320,305	**-65,785**
Long Term				
Full Simulation Period[b]	156,980	8,435	132,279	**-25,359**
Water Year Types[c]				
Wet (32%)	421,000	41,680	168,100	**-88,914**
Above Normal (16%)	272,480	2,309	104,297	34,209
Below Normal (13%)	**-129,184**	13,892	138,247	**-7,570**
Dry (24%)	**-837**	**-38,405**	148,185	**-4,267**
Critical (15%)	**-14,842**	16,108	52,999	**-3,645**

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-11-3. Sacramento River Keswick to Battle Creek Fall-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	1,074,933	1,071,766	1,084,531	1,090,813
20%	1,068,693	1,055,003	1,083,385	1,086,203
30%	1,059,032	1,028,294	1,064,343	1,084,597
40%	1,022,534	981,340	1,028,071	1,084,031
50%	946,852	935,007	938,966	1,083,095
60%	679,708	857,031	826,749	1,071,937
70%	547,205	804,100	693,902	994,128
80%	415,717	737,992	541,879	612,062
90%	288,927	684,923	443,183	241,531
Long Term				
Full Simulation Period[b]	775,472	901,077	838,248	894,774
Water Year Types[c]				
Wet (32%)	397,164	848,767	756,753	608,821
Above Normal (16%)	676,556	915,921	815,092	869,943
Below Normal (13%)	999,599	866,710	827,549	1,077,935
Dry (24%)	1,041,977	916,695	874,647	1,074,316
Critical (15%)	1,052,675	1,003,809	989,051	1,074,106

Alternative 5

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	1,072,916	1,069,935	1,086,073	1,090,825
20%	1,063,291	1,041,299	1,083,662	1,086,256
30%	1,039,438	1,024,636	1,068,169	1,084,652
40%	1,010,234	979,947	1,037,490	1,084,126
50%	961,558	933,945	943,760	1,083,444
60%	699,800	865,331	813,216	1,074,982
70%	551,004	814,714	677,917	1,002,473
80%	430,718	753,181	543,537	619,534
90%	289,670	673,982	444,992	248,783
Long Term				
Full Simulation Period[b]	774,734	901,062	838,739	895,619
Water Year Types[c]				
Wet (32%)	398,505	855,599	750,331	609,125
Above Normal (16%)	686,295	908,103	821,298	866,608
Below Normal (13%)	987,463	868,779	828,188	1,079,389
Dry (24%)	1,043,490	919,730	879,326	1,075,557
Critical (15%)	1,042,779	990,417	991,210	1,079,429

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	-2,018	-1,831	1,542	12
20%	-5,402	-13,704	278	53
30%	-19,594	-3,658	3,826	56
40%	-12,300	-1,393	9,419	94
50%	14,707	-1,062	4,794	349
60%	20,092	8,300	-13,534	3,046
70%	3,799	10,614	-15,985	8,345
80%	15,001	15,189	1,658	7,472
90%	743	-10,942	1,809	7,252
Long Term				
Full Simulation Period[b]	-738	-15	490	844
Water Year Types[c]				
Wet (32%)	1,341	6,832	-6,422	304
Above Normal (16%)	9,739	-7,817	6,206	-3,335
Below Normal (13%)	-12,137	2,069	638	1,454
Dry (24%)	1,513	3,035	4,679	1,240
Critical (15%)	-9,896	-13,392	2,159	5,322

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-11-4. Sacramento River Keswick to Battle Creek Fall-run Spawning WUA, Monthly WUA

Second Basis of Comparison

Statistic	Monthly WUA (Feet2)			
	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	1,075,063	1,084,537	1,088,587	1,090,562
20%	1,070,202	1,070,164	1,084,595	1,086,381
30%	1,061,602	1,039,011	1,077,634	1,085,311
40%	1,024,656	1,007,580	1,069,954	1,084,228
50%	1,010,066	958,002	1,034,898	1,082,736
60%	984,835	915,882	1,006,817	1,073,877
70%	955,282	792,903	963,392	922,017
80%	921,879	736,193	853,474	440,476
90%	666,878	689,992	766,031	176,647
Long Term				
Full Simulation Period[b]	954,392	915,813	964,036	870,201
Water Year Types[c]				
Wet (32%)	838,409	885,485	919,516	516,092
Above Normal (16%)	946,747	928,105	929,572	906,878
Below Normal (13%)	1,002,301	871,146	939,385	1,070,070
Dry (24%)	1,033,166	906,014	1,025,717	1,076,055
Critical (15%)	1,038,764	1,025,479	1,017,627	1,071,403

No Action Alternative

Statistic	Monthly WUA (Feet2)			
	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	1,074,933	1,071,766	1,084,531	1,090,813
20%	1,068,693	1,055,003	1,083,385	1,086,203
30%	1,059,032	1,028,294	1,064,343	1,084,597
40%	1,022,534	981,340	1,028,071	1,084,031
50%	946,852	935,007	938,966	1,083,095
60%	679,708	857,031	826,749	1,071,937
70%	547,205	804,100	693,902	994,128
80%	415,717	737,992	541,879	612,062
90%	288,927	684,923	443,183	241,531
Long Term				
Full Simulation Period[b]	775,472	901,077	838,248	894,774
Water Year Types[c]				
Wet (32%)	397,164	848,767	756,753	608,821
Above Normal (16%)	676,556	915,921	815,092	869,943
Below Normal (13%)	999,599	866,710	827,549	1,077,935
Dry (24%)	1,041,977	916,695	874,647	1,074,316
Critical (15%)	1,052,675	1,003,809	989,051	1,074,106

No Action Alternative minus Second Basis of Comparison

Statistic	Monthly WUA (Feet2)			
	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	**-130**	**-12,771**	**-4,056**	250
20%	**-1,509**	**-15,160**	**-1,210**	**-178**
30%	**-2,570**	**-10,717**	**-13,292**	**-714**
40%	**-2,122**	**-26,240**	**-41,883**	**-197**
50%	**-63,215**	**-22,995**	**-95,932**	360
60%	**-305,127**	**-58,852**	**-180,068**	**-1,940**
70%	**-408,077**	11,197	**-269,489**	72,111
80%	**-506,162**	1,800	**-311,594**	171,587
90%	**-377,950**	**-5,069**	**-322,847**	64,884
Long Term				
Full Simulation Period[b]	**-178,920**	**-14,735**	**-125,788**	24,573
Water Year Types[c]				
Wet (32%)	**-441,244**	**-36,718**	**-162,763**	92,729
Above Normal (16%)	**-270,191**	**-12,185**	**-114,481**	**-36,935**
Below Normal (13%)	**-2,702**	**-4,436**	**-111,836**	7,866
Dry (24%)	8,811	10,681	**-151,070**	**-1,738**
Critical (15%)	13,911	**-21,670**	**-28,576**	2,703

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-11-5. Sacramento River Keswick to Battle Creek Fall-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	1,075,063	1,084,537	1,088,587	1,090,562
20%	1,070,202	1,070,164	1,084,595	1,086,381
30%	1,061,602	1,039,011	1,077,634	1,085,311
40%	1,024,656	1,007,580	1,069,954	1,084,228
50%	1,010,066	958,002	1,034,898	1,082,736
60%	984,835	915,882	1,006,817	1,073,877
70%	955,282	792,903	963,392	922,017
80%	921,879	736,193	853,474	440,476
90%	666,878	689,992	766,031	176,647
Long Term				
Full Simulation Period[b]	954,392	915,813	964,036	870,201
Water Year Types[c]				
Wet (32%)	838,409	885,485	919,516	516,092
Above Normal (16%)	946,747	928,105	929,572	906,878
Below Normal (13%)	1,002,301	871,146	939,385	1,070,070
Dry (24%)	1,033,166	906,014	1,025,717	1,076,055
Critical (15%)	1,038,764	1,025,479	1,017,627	1,071,403

Alternative 3

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	1,075,087	1,078,796	1,086,362	1,091,106
20%	1,067,969	1,062,764	1,084,474	1,086,289
30%	1,050,075	1,033,900	1,079,992	1,084,965
40%	1,029,594	1,007,376	1,071,104	1,084,236
50%	999,853	962,210	1,045,663	1,082,321
60%	967,954	884,014	1,018,409	1,065,798
70%	928,132	807,938	964,944	940,990
80%	806,964	724,973	895,430	431,219
90%	691,766	684,537	763,489	175,746
Long Term				
Full Simulation Period[b]	932,453	909,513	970,527	869,416
Water Year Types[c]				
Wet (32%)	818,164	890,447	924,853	519,907
Above Normal (16%)	949,036	918,229	919,388	904,151
Below Normal (13%)	870,415	880,602	965,796	1,070,366
Dry (24%)	1,041,141	878,291	1,022,832	1,070,050
Critical (15%)	1,037,833	1,019,916	1,042,050	1,070,462

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	24	**-5,741**	**-2,226**	543
20%	**-2,233**	**-7,399**	**-121**	**-92**
30%	**-11,527**	**-5,111**	2,358	**-346**
40%	4,938	**-204**	1,150	8
50%	**-10,214**	4,208	10,766	**-415**
60%	**-16,881**	**-31,869**	11,592	**-8,079**
70%	**-27,150**	15,035	1,552	18,973
80%	**-114,915**	**-11,219**	41,957	**-9,256**
90%	24,889	**-5,456**	**-2,542**	**-901**
Long Term				
Full Simulation Period[b]	**-21,939**	**-6,300**	6,491	**-785**
Water Year Types[c]				
Wet (32%)	**-20,245**	4,962	5,337	3,815
Above Normal (16%)	2,289	**-9,876**	**-10,184**	**-2,726**
Below Normal (13%)	**-131,886**	9,456	26,412	296
Dry (24%)	7,974	**-27,724**	**-2,885**	**-6,005**
Critical (15%)	**-931**	**-5,562**	24,423	**-942**

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-11-6. Sacramento River Keswick to Battle Creek Fall-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	1,075,063	1,084,537	1,088,587	1,090,562
20%	1,070,202	1,070,164	1,084,595	1,086,381
30%	1,061,602	1,039,011	1,077,634	1,085,311
40%	1,024,656	1,007,580	1,069,954	1,084,228
50%	1,010,066	958,002	1,034,898	1,082,736
60%	984,835	915,882	1,006,817	1,073,877
70%	955,282	792,903	963,392	922,017
80%	921,879	736,193	853,474	440,476
90%	666,878	689,992	766,031	176,647
Long Term				
Full Simulation Period[b]	954,392	915,813	964,036	870,201
Water Year Types[c]				
Wet (32%)	838,409	885,485	919,516	516,092
Above Normal (16%)	946,747	928,105	929,572	906,878
Below Normal (13%)	1,002,301	871,146	939,385	1,070,070
Dry (24%)	1,033,166	906,014	1,025,717	1,076,055
Critical (15%)	1,038,764	1,025,479	1,017,627	1,071,403

Alternative 5

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	1,072,916	1,069,935	1,086,073	1,090,825
20%	1,063,291	1,041,299	1,083,662	1,086,256
30%	1,039,438	1,024,636	1,068,169	1,084,652
40%	1,010,234	979,947	1,037,490	1,084,126
50%	961,558	933,945	943,760	1,083,444
60%	699,800	865,331	813,216	1,074,982
70%	551,004	814,714	677,917	1,002,473
80%	430,718	753,181	543,537	619,534
90%	289,670	673,982	444,992	248,783
Long Term				
Full Simulation Period[b]	774,734	901,062	838,739	895,619
Water Year Types[c]				
Wet (32%)	398,505	855,599	750,331	609,125
Above Normal (16%)	686,295	908,103	821,298	866,608
Below Normal (13%)	987,463	868,779	828,188	1,079,389
Dry (24%)	1,043,490	919,730	879,326	1,075,557
Critical (15%)	1,042,779	990,417	991,210	1,079,429

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Sep	Oct	Nov	Dec
Probability of Exceedance[a]				
10%	-2,148	-14,602	-2,514	263
20%	-6,911	-28,864	-932	-125
30%	-22,164	-14,375	-9,466	-659
40%	-14,422	-27,632	-32,464	-103
50%	-48,508	-24,057	-91,137	708
60%	-285,035	-50,552	-193,602	1,106
70%	-404,278	21,811	-285,474	80,456
80%	-491,161	16,989	-309,936	179,059
90%	-377,207	-16,011	-321,039	72,135
Long Term				
Full Simulation Period[b]	-179,658	-14,750	-125,297	25,418
Water Year Types[c]				
Wet (32%)	-439,904	-29,886	-169,185	93,034
Above Normal (16%)	-260,452	-20,002	-108,275	-40,270
Below Normal (13%)	-14,839	-2,367	-111,197	9,320
Dry (24%)	10,324	13,715	-146,391	-498
Critical (15%)	4,015	-35,062	-26,417	8,026

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.12. Sacramento River Keswick to Battle Creek Fall-run Fry Rearing WUA

Table C-12-1. Sacramento River Keswick to Battle Creek Fall-run Fry Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Dec	Jan	Feb	Mar
Probability of Exceedance[a]				
10%	1,836,999	1,837,941	1,839,149	1,846,924
20%	1,833,589	1,834,217	1,834,343	1,839,318
30%	1,811,962	1,829,031	1,830,698	1,834,085
40%	1,775,420	1,812,257	1,811,473	1,810,269
50%	1,766,469	1,745,795	1,661,674	1,743,299
60%	1,688,348	1,645,492	1,530,919	1,653,325
70%	1,428,559	1,311,020	1,311,020	1,311,020
80%	1,276,856	1,231,975	1,281,326	1,225,664
90%	1,183,556	1,108,337	1,220,578	1,108,003
Long Term				
Full Simulation Period[b]	1,602,491	1,590,612	1,571,611	1,583,807
Water Year Types[c]				
Wet (32%)	1,383,273	1,344,092	1,371,660	1,330,653
Above Normal (16%)	1,538,908	1,472,333	1,441,339	1,466,921
Below Normal (13%)	1,738,904	1,759,324	1,574,595	1,732,096
Dry (24%)	1,747,973	1,757,216	1,787,039	1,758,763
Critical (15%)	1,778,828	1,820,551	1,784,184	1,831,408

Alternative 1

	Monthly WUA (Feet2)			
Statistic	Dec	Jan	Feb	Mar
Probability of Exceedance[a]				
10%	1,836,447	1,837,875	1,839,315	1,846,944
20%	1,827,387	1,834,682	1,834,204	1,839,665
30%	1,810,323	1,829,615	1,828,499	1,833,002
40%	1,775,114	1,793,817	1,802,530	1,808,892
50%	1,760,438	1,706,232	1,673,635	1,704,154
60%	1,696,983	1,581,030	1,439,494	1,640,408
70%	1,311,416	1,303,986	1,311,020	1,300,764
80%	1,268,338	1,215,295	1,277,051	1,220,621
90%	1,177,260	1,104,493	1,197,414	1,116,350
Long Term				
Full Simulation Period[b]	1,597,909	1,557,190	1,564,976	1,570,429
Water Year Types[c]				
Wet (32%)	1,343,276	1,326,407	1,351,949	1,330,942
Above Normal (16%)	1,591,617	1,433,555	1,399,937	1,427,190
Below Normal (13%)	1,726,938	1,645,079	1,574,016	1,664,987
Dry (24%)	1,758,414	1,744,848	1,786,756	1,768,554
Critical (15%)	1,770,645	1,797,825	1,827,406	1,827,605

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Dec	Jan	Feb	Mar
Probability of Exceedance[a]				
10%	-552	-66	166	20
20%	-6,202	465	-139	347
30%	-1,639	584	-2,198	-1,083
40%	-306	-18,440	-8,942	-1,378
50%	-6,031	-39,563	11,961	-39,146
60%	8,635	-64,462	-91,424	-12,917
70%	-117,143	-7,034	0	-10,256
80%	-8,518	-16,680	-4,275	-5,044
90%	-6,295	-3,845	-23,163	8,348
Long Term				
Full Simulation Period[b]	-4,582	-33,423	-6,635	-13,378
Water Year Types[c]				
Wet (32%)	-39,998	-17,685	-19,712	289
Above Normal (16%)	52,708	-38,777	-41,402	-39,731
Below Normal (13%)	-11,966	-114,245	-580	-67,110
Dry (24%)	10,442	-12,368	-283	9,791
Critical (15%)	-8,182	-22,725	43,222	-3,803

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-12-2. Sacramento River Keswick to Battle Creek Fall-run Fry Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Dec	Jan	Feb	Mar
Probability of Exceedance[a]				
10%	1,836,999	1,837,941	1,839,149	1,846,924
20%	1,833,589	1,834,217	1,834,343	1,839,318
30%	1,811,962	1,829,031	1,830,698	1,834,085
40%	1,775,420	1,812,257	1,811,473	1,810,269
50%	1,766,469	1,745,795	1,661,674	1,743,299
60%	1,688,348	1,645,492	1,530,919	1,653,325
70%	1,428,559	1,311,020	1,311,020	1,311,020
80%	1,276,856	1,231,975	1,281,326	1,225,664
90%	1,183,556	1,108,337	1,220,578	1,108,003
Long Term				
Full Simulation Period[b]	1,602,491	1,590,612	1,571,611	1,583,807
Water Year Types[c]				
Wet (32%)	1,383,273	1,344,092	1,371,660	1,330,653
Above Normal (16%)	1,538,908	1,472,333	1,441,339	1,466,921
Below Normal (13%)	1,738,904	1,759,324	1,574,595	1,732,096
Dry (24%)	1,747,973	1,757,216	1,787,039	1,758,763
Critical (15%)	1,778,828	1,820,551	1,784,184	1,831,408

Alternative 3

	Monthly WUA (Feet2)			
Statistic	Dec	Jan	Feb	Mar
Probability of Exceedance[a]				
10%	1,835,974	1,838,496	1,838,677	1,847,188
20%	1,827,096	1,835,518	1,834,419	1,838,711
30%	1,811,574	1,830,317	1,830,254	1,833,185
40%	1,771,154	1,809,580	1,810,678	1,807,068
50%	1,749,945	1,736,821	1,661,344	1,704,256
60%	1,658,354	1,646,633	1,371,780	1,640,456
70%	1,328,034	1,304,031	1,311,020	1,303,088
80%	1,277,735	1,219,419	1,268,292	1,219,321
90%	1,177,261	1,107,001	1,197,406	1,116,168
Long Term				
Full Simulation Period[b]	1,592,203	1,566,772	1,562,546	1,569,754
Water Year Types[c]				
Wet (32%)	1,351,062	1,328,270	1,352,032	1,330,949
Above Normal (16%)	1,581,549	1,447,056	1,402,862	1,430,399
Below Normal (13%)	1,728,987	1,645,383	1,558,479	1,666,917
Dry (24%)	1,731,786	1,757,650	1,807,936	1,764,199
Critical (15%)	1,768,194	1,823,029	1,786,396	1,824,995

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Dec	Jan	Feb	Mar
Probability of Exceedance[a]				
10%	-1,025	555	-471	264
20%	-6,493	1,300	76	-607
30%	-388	1,286	-444	-900
40%	-4,266	-2,678	-795	-3,201
50%	-16,523	-8,973	-330	-39,043
60%	-29,994	1,141	-159,138	-12,869
70%	-100,525	-6,989	0	-7,932
80%	879	-12,556	-13,034	-6,344
90%	-6,294	-1,337	-23,172	8,165
Long Term				
Full Simulation Period[b]	-10,288	-23,840	-9,065	-14,052
Water Year Types[c]				
Wet (32%)	-32,211	-15,822	-19,628	296
Above Normal (16%)	42,641	-25,276	-38,477	-36,522
Below Normal (13%)	-9,917	-113,941	-16,116	-65,180
Dry (24%)	-16,187	434	20,897	5,436
Critical (15%)	-10,633	2,478	2,213	-6,413

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-12-3. Sacramento River Keswick to Battle Creek Fall-run Fry Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Dec	Jan	Feb	Mar
Probability of Exceedance[a]				
10%	1,836,999	1,837,941	1,839,149	1,846,924
20%	1,833,589	1,834,217	1,834,343	1,839,318
30%	1,811,962	1,829,031	1,830,698	1,834,085
40%	1,775,420	1,812,257	1,811,473	1,810,269
50%	1,766,469	1,745,795	1,661,674	1,743,299
60%	1,688,348	1,645,492	1,530,919	1,653,325
70%	1,428,559	1,311,020	1,311,020	1,311,020
80%	1,276,856	1,231,975	1,281,326	1,225,664
90%	1,183,556	1,108,337	1,220,578	1,108,003
Long Term				
Full Simulation Period[b]	1,602,491	1,590,612	1,571,611	1,583,807
Water Year Types[c]				
Wet (32%)	1,383,273	1,344,092	1,371,660	1,330,653
Above Normal (16%)	1,538,908	1,472,333	1,441,339	1,466,921
Below Normal (13%)	1,738,904	1,759,324	1,574,595	1,732,096
Dry (24%)	1,747,973	1,757,216	1,787,039	1,758,763
Critical (15%)	1,778,828	1,820,551	1,784,184	1,831,408

Alternative 5

	Monthly WUA (Feet2)			
Statistic	Dec	Jan	Feb	Mar
Probability of Exceedance[a]				
10%	1,836,851	1,838,528	1,838,896	1,846,979
20%	1,833,450	1,835,214	1,834,287	1,839,223
30%	1,812,009	1,830,011	1,830,667	1,834,028
40%	1,775,411	1,812,246	1,811,477	1,807,903
50%	1,766,497	1,745,670	1,661,720	1,743,296
60%	1,710,072	1,644,449	1,530,819	1,653,261
70%	1,449,504	1,311,020	1,311,020	1,311,020
80%	1,276,577	1,231,973	1,281,994	1,225,655
90%	1,173,452	1,108,309	1,220,576	1,110,017
Long Term				
Full Simulation Period[b]	1,605,661	1,587,990	1,571,817	1,583,496
Water Year Types[c]				
Wet (32%)	1,380,619	1,336,209	1,371,609	1,330,958
Above Normal (16%)	1,538,892	1,471,480	1,442,129	1,467,204
Below Normal (13%)	1,746,586	1,757,180	1,577,508	1,730,196
Dry (24%)	1,753,959	1,757,185	1,785,705	1,758,133
Critical (15%)	1,789,243	1,822,654	1,784,399	1,831,107

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Dec	Jan	Feb	Mar
Probability of Exceedance[a]				
10%	-148	587	-253	55
20%	-139	997	-56	-96
30%	47	980	-31	-57
40%	-9	-12	4	-2,366
50%	28	-124	46	-3
60%	21,724	-1,043	-99	-64
70%	20,945	0	0	0
80%	-279	-2	668	-9
90%	-10,103	-28	-2	2,015
Long Term				
Full Simulation Period[b]	3,170	-2,622	206	-311
Water Year Types[c]				
Wet (32%)	-2,655	-7,883	-51	305
Above Normal (16%)	-16	-853	790	283
Below Normal (13%)	7,682	-2,144	2,912	-1,900
Dry (24%)	5,986	-31	-1,334	-631
Critical (15%)	10,415	2,103	216	-301

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-12-4. Sacramento River Keswick to Battle Creek Fall-run Fry Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Dec	Jan	Feb	Mar
Probability of Exceedance[a]				
10%	1,836,447	1,837,875	1,839,315	1,846,944
20%	1,827,387	1,834,682	1,834,204	1,839,665
30%	1,810,323	1,829,615	1,828,499	1,833,002
40%	1,775,114	1,793,817	1,802,530	1,808,892
50%	1,760,438	1,706,232	1,673,635	1,704,154
60%	1,696,983	1,581,030	1,439,494	1,640,408
70%	1,311,416	1,303,986	1,311,020	1,300,764
80%	1,268,338	1,215,295	1,277,051	1,220,621
90%	1,177,260	1,104,493	1,197,414	1,116,350
Long Term				
Full Simulation Period[b]	1,597,909	1,557,190	1,564,976	1,570,429
Water Year Types[c]				
Wet (32%)	1,343,276	1,326,407	1,351,949	1,330,942
Above Normal (16%)	1,591,617	1,433,555	1,399,937	1,427,190
Below Normal (13%)	1,726,938	1,645,079	1,574,016	1,664,987
Dry (24%)	1,758,414	1,744,848	1,786,756	1,768,554
Critical (15%)	1,770,645	1,797,825	1,827,406	1,827,605

No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Dec	Jan	Feb	Mar
Probability of Exceedance[a]				
10%	1,836,999	1,837,941	1,839,149	1,846,924
20%	1,833,589	1,834,217	1,834,343	1,839,318
30%	1,811,962	1,829,031	1,830,698	1,834,085
40%	1,775,420	1,812,257	1,811,473	1,810,269
50%	1,766,469	1,745,795	1,661,674	1,743,299
60%	1,688,348	1,645,492	1,530,919	1,653,325
70%	1,428,559	1,311,020	1,311,020	1,311,020
80%	1,276,856	1,231,975	1,281,326	1,225,664
90%	1,183,556	1,108,337	1,220,578	1,108,003
Long Term				
Full Simulation Period[b]	1,602,491	1,590,612	1,571,611	1,583,807
Water Year Types[c]				
Wet (32%)	1,383,273	1,344,092	1,371,660	1,330,653
Above Normal (16%)	1,538,908	1,472,333	1,441,339	1,466,921
Below Normal (13%)	1,738,904	1,759,324	1,574,595	1,732,096
Dry (24%)	1,747,973	1,757,216	1,787,039	1,758,763
Critical (15%)	1,778,828	1,820,551	1,784,184	1,831,408

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Dec	Jan	Feb	Mar
Probability of Exceedance[a]				
10%	552	66	**-166**	**-20**
20%	6,202	**-465**	139	**-347**
30%	1,639	**-584**	2,198	1,083
40%	306	18,440	8,942	1,378
50%	6,031	39,563	**-11,961**	39,146
60%	**-8,635**	64,462	91,424	12,917
70%	117,143	7,034	0	10,256
80%	8,518	16,680	4,275	5,044
90%	6,295	3,845	23,163	**-8,348**
Long Term				
Full Simulation Period[b]	4,582	33,423	6,635	13,378
Water Year Types[c]				
Wet (32%)	39,998	17,685	19,712	**-289**
Above Normal (16%)	**-52,708**	38,777	41,402	39,731
Below Normal (13%)	11,966	114,245	580	67,110
Dry (24%)	**-10,442**	12,368	283	**-9,791**
Critical (15%)	8,182	22,725	**-43,222**	3,803

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-12-5. Sacramento River Keswick to Battle Creek Fall-run Fry Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Dec	Jan	Feb	Mar
Probability of Exceedance[a]				
10%	1,836,447	1,837,875	1,839,315	1,846,944
20%	1,827,387	1,834,682	1,834,204	1,839,665
30%	1,810,323	1,829,615	1,828,499	1,833,002
40%	1,775,114	1,793,817	1,802,530	1,808,892
50%	1,760,438	1,706,232	1,673,635	1,704,154
60%	1,696,983	1,581,030	1,439,494	1,640,408
70%	1,311,416	1,303,986	1,311,020	1,300,764
80%	1,268,338	1,215,295	1,277,051	1,220,621
90%	1,177,260	1,104,493	1,197,414	1,116,350
Long Term				
Full Simulation Period[b]	1,597,909	1,557,190	1,564,976	1,570,429
Water Year Types[c]				
Wet (32%)	1,343,276	1,326,407	1,351,949	1,330,942
Above Normal (16%)	1,591,617	1,433,555	1,399,937	1,427,190
Below Normal (13%)	1,726,938	1,645,079	1,574,016	1,664,987
Dry (24%)	1,758,414	1,744,848	1,786,756	1,768,554
Critical (15%)	1,770,645	1,797,825	1,827,406	1,827,605

Alternative 3

	Monthly WUA (Feet2)			
Statistic	Dec	Jan	Feb	Mar
Probability of Exceedance[a]				
10%	1,835,974	1,838,496	1,838,677	1,847,188
20%	1,827,096	1,835,518	1,834,419	1,838,711
30%	1,811,574	1,830,317	1,830,254	1,833,185
40%	1,771,154	1,809,580	1,810,678	1,807,068
50%	1,749,945	1,736,821	1,661,344	1,704,256
60%	1,658,354	1,646,633	1,371,780	1,640,456
70%	1,328,034	1,304,031	1,311,020	1,303,088
80%	1,277,735	1,219,419	1,268,292	1,219,321
90%	1,177,261	1,107,001	1,197,406	1,116,168
Long Term				
Full Simulation Period[b]	1,592,203	1,566,772	1,562,546	1,569,754
Water Year Types[c]				
Wet (32%)	1,351,062	1,328,270	1,352,032	1,330,949
Above Normal (16%)	1,581,549	1,447,056	1,402,862	1,430,399
Below Normal (13%)	1,728,987	1,645,383	1,558,479	1,666,917
Dry (24%)	1,731,786	1,757,650	1,807,936	1,764,199
Critical (15%)	1,768,194	1,823,029	1,786,396	1,824,995

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Dec	Jan	Feb	Mar
Probability of Exceedance[a]				
10%	-473	621	-638	244
20%	-291	836	215	-954
30%	1,250	702	1,754	183
40%	-3,960	15,763	8,148	-1,824
50%	-10,493	30,590	-12,291	103
60%	-38,629	65,603	-67,714	48
70%	16,618	45	0	2,324
80%	9,397	4,123	-8,759	-1,300
90%	1	2,508	-9	-182
Long Term				
Full Simulation Period[b]	-5,706	9,583	-2,429	-674
Water Year Types[c]				
Wet (32%)	7,787	1,863	83	7
Above Normal (16%)	-10,068	13,501	2,926	3,209
Below Normal (13%)	2,049	304	-15,536	1,930
Dry (24%)	-26,629	12,802	21,180	-4,355
Critical (15%)	-2,451	25,203	-41,009	-2,610

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-12-6. Sacramento River Keswick to Battle Creek Fall-run Fry Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Dec	Jan	Feb	Mar
Probability of Exceedance[a]				
10%	1,836,447	1,837,875	1,839,315	1,846,944
20%	1,827,387	1,834,682	1,834,204	1,839,665
30%	1,810,323	1,829,615	1,828,499	1,833,002
40%	1,775,114	1,793,817	1,802,530	1,808,892
50%	1,760,438	1,706,232	1,673,635	1,704,154
60%	1,696,983	1,581,030	1,439,494	1,640,408
70%	1,311,416	1,303,986	1,311,020	1,300,764
80%	1,268,338	1,215,295	1,277,051	1,220,621
90%	1,177,260	1,104,493	1,197,414	1,116,350
Long Term				
Full Simulation Period[b]	1,597,909	1,557,190	1,564,976	1,570,429
Water Year Types[c]				
Wet (32%)	1,343,276	1,326,407	1,351,949	1,330,942
Above Normal (16%)	1,591,617	1,433,555	1,399,937	1,427,190
Below Normal (13%)	1,726,938	1,645,079	1,574,016	1,664,987
Dry (24%)	1,758,414	1,744,848	1,786,756	1,768,554
Critical (15%)	1,770,645	1,797,825	1,827,406	1,827,605

Alternative 5

	Monthly WUA (Feet2)			
Statistic	Dec	Jan	Feb	Mar
Probability of Exceedance[a]				
10%	1,836,851	1,838,528	1,838,896	1,846,979
20%	1,833,450	1,835,214	1,834,287	1,839,223
30%	1,812,009	1,830,011	1,830,667	1,834,028
40%	1,775,411	1,812,246	1,811,477	1,807,903
50%	1,766,497	1,745,670	1,661,720	1,743,296
60%	1,710,072	1,644,449	1,530,819	1,653,261
70%	1,449,504	1,311,020	1,311,020	1,311,020
80%	1,276,577	1,231,973	1,281,994	1,225,655
90%	1,173,452	1,108,309	1,220,576	1,110,017
Long Term				
Full Simulation Period[b]	1,605,661	1,587,990	1,571,817	1,583,496
Water Year Types[c]				
Wet (32%)	1,380,619	1,336,209	1,371,609	1,330,958
Above Normal (16%)	1,538,892	1,471,480	1,442,129	1,467,204
Below Normal (13%)	1,746,586	1,757,180	1,577,508	1,730,196
Dry (24%)	1,753,959	1,757,185	1,785,705	1,758,133
Critical (15%)	1,789,243	1,822,654	1,784,399	1,831,107

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Dec	Jan	Feb	Mar
Probability of Exceedance[a]				
10%	404	653	**-419**	35
20%	6,063	532	83	**-443**
30%	1,686	396	2,168	1,026
40%	297	18,429	8,947	**-989**
50%	6,058	39,439	**-11,915**	39,143
60%	13,089	63,418	91,325	12,853
70%	138,088	7,034	0	10,256
80%	8,239	16,678	4,943	5,035
90%	**-3,808**	3,816	23,161	**-6,333**
Long Term				
Full Simulation Period[b]	7,752	30,801	6,841	13,067
Water Year Types[c]				
Wet (32%)	37,343	9,802	19,660	16
Above Normal (16%)	**-52,724**	37,924	42,193	40,014
Below Normal (13%)	19,648	112,101	3,492	65,210
Dry (24%)	**-4,456**	12,337	**-1,051**	**-10,421**
Critical (15%)	18,597	24,829	**-43,007**	3,502

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.13. Sacramento River Keswick to Battle Creek Fall-run Juvenile Rearing WUA

Table C-13-1. Sacramento River Keswick to Battle Creek Fall-run Juvenile Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	721,002	723,047	704,910	656,726	503,215
20%	719,853	721,142	687,236	623,601	486,703
30%	719,092	719,722	681,874	608,235	463,339
40%	704,092	706,340	665,514	588,612	450,403
50%	676,464	687,759	638,836	561,216	436,515
60%	649,263	674,942	613,206	535,332	424,050
70%	403,624	520,710	579,902	510,050	407,806
80%	378,338	378,338	534,034	483,122	393,079
90%	369,761	366,811	424,846	452,504	373,036
Long Term					
Full Simulation Period[b]	588,471	605,418	604,728	554,973	438,314
Water Year Types[c]					
Wet (32%)	483,390	472,828	563,680	520,384	451,496
Above Normal (16%)	493,018	563,945	600,103	557,423	418,721
Below Normal (13%)	606,222	681,674	626,387	555,242	423,098
Dry (24%)	707,120	696,237	657,710	577,109	427,979
Critical (15%)	705,534	716,357	590,522	590,121	462,154

Alternative 1

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	721,063	723,048	705,169	640,372	502,929
20%	719,735	721,120	687,058	611,377	470,171
30%	718,516	718,835	680,612	590,416	447,187
40%	696,502	704,121	649,616	564,524	429,169
50%	678,597	682,742	623,907	547,394	413,143
60%	629,138	672,572	594,565	523,137	403,158
70%	378,338	492,577	567,452	500,925	384,743
80%	377,835	378,338	508,129	469,407	373,620
90%	366,054	366,217	425,645	436,189	357,375
Long Term					
Full Simulation Period[b]	582,690	598,696	596,103	540,655	423,270
Water Year Types[c]					
Wet (32%)	474,304	473,273	559,043	513,375	446,858
Above Normal (16%)	471,639	540,324	596,319	538,406	401,656
Below Normal (13%)	598,901	650,004	605,370	518,532	403,347
Dry (24%)	706,213	701,479	644,542	561,891	406,785
Critical (15%)	717,100	715,342	586,941	587,088	441,313

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	61	1	259	-16,354	-286
20%	-119	-22	-178	-12,224	-16,532
30%	-576	-887	-1,262	-17,819	-16,152
40%	-7,591	-2,220	-15,898	-24,088	-21,234
50%	2,132	-5,017	-14,929	-13,822	-23,372
60%	-20,125	-2,370	-18,641	-12,195	-20,891
70%	-25,286	-28,133	-12,450	-9,125	-23,063
80%	-503	0	-25,905	-13,715	-19,459
90%	-3,707	-594	800	-16,315	-15,661
Long Term					
Full Simulation Period[b]	-5,781	-6,722	-8,625	-14,317	-15,045
Water Year Types[c]					
Wet (32%)	-9,087	445	-4,636	-7,009	-4,637
Above Normal (16%)	-21,378	-23,622	-3,783	-19,018	-17,065
Below Normal (13%)	-7,322	-31,670	-21,017	-36,710	-19,752
Dry (24%)	-907	5,242	-13,168	-15,217	-21,194
Critical (15%)	11,566	-1,015	-3,581	-3,033	-20,841

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-13-2. Sacramento River Keswick to Battle Creek Fall-run Juvenile Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	721,002	723,047	704,910	656,726	503,215
20%	719,853	721,142	687,236	623,601	486,703
30%	719,092	719,722	681,874	608,235	463,339
40%	704,092	706,340	665,514	588,612	450,403
50%	676,464	687,759	638,836	561,216	436,515
60%	649,263	674,942	613,206	535,332	424,050
70%	403,624	520,710	579,902	510,050	407,806
80%	378,338	378,338	534,034	483,122	393,079
90%	369,761	366,811	424,846	452,504	373,036
Long Term					
Full Simulation Period[b]	588,471	605,418	604,728	554,973	438,314
Water Year Types[c]					
Wet (32%)	483,390	472,828	563,680	520,384	451,496
Above Normal (16%)	493,018	563,945	600,103	557,423	418,721
Below Normal (13%)	606,222	681,674	626,387	555,242	423,098
Dry (24%)	707,120	696,237	657,710	577,109	427,979
Critical (15%)	705,534	716,357	590,522	590,121	462,154

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	720,931	723,052	705,097	638,154	503,036
20%	720,012	720,868	686,689	612,642	464,683
30%	718,976	718,827	680,616	590,012	445,085
40%	704,178	705,730	661,611	567,192	426,581
50%	676,409	682,755	631,006	548,611	417,077
60%	594,319	672,581	605,289	523,893	407,338
70%	378,338	492,690	569,762	490,963	388,230
80%	377,886	378,338	512,407	468,735	372,196
90%	366,801	366,241	425,840	434,899	362,608
Long Term					
Full Simulation Period[b]	583,588	598,451	599,703	540,668	424,375
Water Year Types[c]					
Wet (32%)	474,326	473,279	559,940	513,071	443,730
Above Normal (16%)	480,224	541,195	599,079	535,276	405,415
Below Normal (13%)	597,108	650,754	609,199	520,182	407,747
Dry (24%)	711,737	699,462	651,809	563,157	408,518
Critical (15%)	706,325	715,389	590,988	587,598	444,648

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	-71	4	186	-18,572	-178
20%	159	-274	-547	-10,959	-22,020
30%	-116	-895	-1,258	-18,224	-18,253
40%	86	-610	-3,902	-21,420	-23,822
50%	-56	-5,004	-7,830	-12,605	-19,438
60%	-54,944	-2,361	-7,917	-11,439	-16,711
70%	-25,286	-28,020	-10,140	-19,087	-19,576
80%	-452	0	-21,627	-14,387	-20,882
90%	-2,959	-570	994	-17,605	-10,428
Long Term					
Full Simulation Period[b]	-4,883	-6,967	-5,025	-14,305	-13,939
Water Year Types[c]					
Wet (32%)	-9,065	451	-3,740	-7,313	-7,765
Above Normal (16%)	-12,794	-22,750	-1,024	-22,147	-13,306
Below Normal (13%)	-9,114	-30,920	-17,187	-35,060	-15,351
Dry (24%)	4,617	3,225	-5,901	-13,952	-19,461
Critical (15%)	792	-968	466	-2,522	-17,506

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-13-3. Sacramento River Keswick to Battle Creek Fall-run Juvenile Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	721,002	723,047	704,910	656,726	503,215
20%	719,853	721,142	687,236	623,601	486,703
30%	719,092	719,722	681,874	608,235	463,339
40%	704,092	706,340	665,514	588,612	450,403
50%	676,464	687,759	638,836	561,216	436,515
60%	649,263	674,942	613,206	535,332	424,050
70%	403,624	520,710	579,902	510,050	407,806
80%	378,338	378,338	534,034	483,122	393,079
90%	369,761	366,811	424,846	452,504	373,036
Long Term					
Full Simulation Period[b]	588,471	605,418	604,728	554,973	438,314
Water Year Types[c]					
Wet (32%)	483,390	472,828	563,680	520,384	451,496
Above Normal (16%)	493,018	563,945	600,103	557,423	418,721
Below Normal (13%)	606,222	681,674	626,387	555,242	423,098
Dry (24%)	707,120	696,237	657,710	577,109	427,979
Critical (15%)	705,534	716,357	590,522	590,121	462,154

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	720,968	723,037	704,931	655,949	505,143
20%	719,865	721,139	687,047	623,626	487,919
30%	719,082	719,715	681,784	608,786	465,855
40%	704,091	705,722	665,418	593,817	450,304
50%	676,474	687,739	639,188	564,339	442,429
60%	649,239	674,930	613,477	539,091	424,453
70%	405,773	520,685	582,039	518,983	410,505
80%	378,338	378,382	534,323	496,351	391,138
90%	368,085	366,811	425,868	463,149	374,697
Long Term					
Full Simulation Period[b]	588,544	604,926	606,746	561,148	439,824
Water Year Types[c]					
Wet (32%)	483,657	472,669	563,662	520,206	451,712
Above Normal (16%)	493,151	563,710	600,140	561,398	419,184
Below Normal (13%)	606,522	680,363	624,160	557,080	422,316
Dry (24%)	706,776	695,357	662,013	592,096	427,794
Critical (15%)	705,611	716,263	599,179	601,732	472,524

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	-34	-10	21	-776	1,928
20%	12	-3	-189	25	1,216
30%	-10	-7	-91	550	2,517
40%	-1	-618	-96	5,205	-99
50%	9	-20	352	3,123	5,914
60%	-24	-12	271	3,759	403
70%	2,149	-25	2,138	8,933	2,699
80%	0	44	289	13,229	-1,940
90%	-1,676	0	1,022	10,645	1,661
Long Term					
Full Simulation Period[b]	73	-492	2,018	6,175	1,510
Water Year Types[c]					
Wet (32%)	266	-159	-18	-178	217
Above Normal (16%)	133	-235	38	3,975	463
Below Normal (13%)	300	-1,311	-2,227	1,838	-783
Dry (24%)	-344	-880	4,303	14,988	-185
Critical (15%)	78	-95	8,658	11,611	10,370

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-13-4. Sacramento River Keswick to Battle Creek Fall-run Juvenile Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	721,063	723,048	705,169	640,372	502,929
20%	719,735	721,120	687,058	611,377	470,171
30%	718,516	718,835	680,612	590,416	447,187
40%	696,502	704,121	649,616	564,524	429,169
50%	678,597	682,742	623,907	547,394	413,143
60%	629,138	672,572	594,565	523,137	403,158
70%	378,338	492,577	567,452	500,925	384,743
80%	377,835	378,338	508,129	469,407	373,620
90%	366,054	366,217	425,645	436,189	357,375
Long Term					
Full Simulation Period[b]	582,690	598,696	596,103	540,655	423,270
Water Year Types[c]					
Wet (32%)	474,304	473,273	559,043	513,375	446,858
Above Normal (16%)	471,639	540,324	596,319	538,406	401,656
Below Normal (13%)	598,901	650,004	605,370	518,532	403,347
Dry (24%)	706,213	701,479	644,542	561,891	406,785
Critical (15%)	717,100	715,342	586,941	587,088	441,313

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	721,002	723,047	704,910	656,726	503,215
20%	719,853	721,142	687,236	623,601	486,703
30%	719,092	719,722	681,874	608,235	463,339
40%	704,092	706,340	665,514	588,612	450,403
50%	676,464	687,759	638,836	561,216	436,515
60%	649,263	674,942	613,206	535,332	424,050
70%	403,624	520,710	579,902	510,050	407,806
80%	378,338	378,338	534,034	483,122	393,079
90%	369,761	366,811	424,846	452,504	373,036
Long Term					
Full Simulation Period[b]	588,471	605,418	604,728	554,973	438,314
Water Year Types[c]					
Wet (32%)	483,390	472,828	563,680	520,384	451,496
Above Normal (16%)	493,018	563,945	600,103	557,423	418,721
Below Normal (13%)	606,222	681,674	626,387	555,242	423,098
Dry (24%)	707,120	696,237	657,710	577,109	427,979
Critical (15%)	705,534	716,357	590,522	590,121	462,154

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	-61	-1	-259	16,354	286
20%	119	22	178	12,224	16,532
30%	576	887	1,262	17,819	16,152
40%	7,591	2,220	15,898	24,088	21,234
50%	-2,132	5,017	14,929	13,822	23,372
60%	20,125	2,370	18,641	12,195	20,891
70%	25,286	28,133	12,450	9,125	23,063
80%	503	0	25,905	13,715	19,459
90%	3,707	594	-800	16,315	15,661
Long Term					
Full Simulation Period[b]	5,781	6,722	8,625	14,317	15,045
Water Year Types[c]					
Wet (32%)	9,087	-445	4,636	7,009	4,637
Above Normal (16%)	21,378	23,622	3,783	19,018	17,065
Below Normal (13%)	7,322	31,670	21,017	36,710	19,752
Dry (24%)	907	-5,242	13,168	15,217	21,194
Critical (15%)	-11,566	1,015	3,581	3,033	20,841

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-13-5. Sacramento River Keswick to Battle Creek Fall-run Juvenile Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	721,063	723,048	705,169	640,372	502,929
20%	719,735	721,120	687,058	611,377	470,171
30%	718,516	718,835	680,612	590,416	447,187
40%	696,502	704,121	649,616	564,524	429,169
50%	678,597	682,742	623,907	547,394	413,143
60%	629,138	672,572	594,565	523,137	403,158
70%	378,338	492,577	567,452	500,925	384,743
80%	377,835	378,338	508,129	469,407	373,620
90%	366,054	366,217	425,645	436,189	357,375
Long Term					
Full Simulation Period[b]	582,690	598,696	596,103	540,655	423,270
Water Year Types[c]					
Wet (32%)	474,304	473,273	559,043	513,375	446,858
Above Normal (16%)	471,639	540,324	596,319	538,406	401,656
Below Normal (13%)	598,901	650,004	605,370	518,532	403,347
Dry (24%)	706,213	701,479	644,542	561,891	406,785
Critical (15%)	717,100	715,342	586,941	587,088	441,313

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	720,931	723,052	705,097	638,154	503,036
20%	720,012	720,868	686,689	612,642	464,683
30%	718,976	718,827	680,616	590,012	445,085
40%	704,178	705,730	661,611	567,192	426,581
50%	676,409	682,755	631,006	548,611	417,077
60%	594,319	672,581	605,289	523,893	407,338
70%	378,338	492,690	569,762	490,963	388,230
80%	377,886	378,338	512,407	468,735	372,196
90%	366,801	366,241	425,840	434,899	362,608
Long Term					
Full Simulation Period[b]	583,588	598,451	599,703	540,668	424,375
Water Year Types[c]					
Wet (32%)	474,326	473,279	559,940	513,071	443,730
Above Normal (16%)	480,224	541,195	599,079	535,276	405,415
Below Normal (13%)	597,108	650,754	609,199	520,182	407,747
Dry (24%)	711,737	699,462	651,809	563,157	408,518
Critical (15%)	706,325	715,389	590,988	587,598	444,648

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	-133	3	-73	-2,218	107
20%	277	-252	-369	1,265	-5,488
30%	460	-8	4	-405	-2,102
40%	7,677	1,609	11,996	2,669	-2,588
50%	-2,188	13	7,099	1,217	3,934
60%	-34,819	9	10,725	755	4,180
70%	0	113	2,310	-9,962	3,487
80%	50	0	4,278	-673	-1,424
90%	748	24	194	-1,290	5,233
Long Term					
Full Simulation Period[b]	898	-244	3,600	12	1,105
Water Year Types[c]					
Wet (32%)	22	6	896	-304	-3,128
Above Normal (16%)	8,584	871	2,760	-3,130	3,759
Below Normal (13%)	-1,793	750	3,829	1,650	4,400
Dry (24%)	5,524	-2,017	7,267	1,266	1,733
Critical (15%)	-10,775	47	4,047	511	3,335

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-13-6. Sacramento River Keswick to Battle Creek Fall-run Juvenile Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	721,063	723,048	705,169	640,372	502,929
20%	719,735	721,120	687,058	611,377	470,171
30%	718,516	718,835	680,612	590,416	447,187
40%	696,502	704,121	649,616	564,524	429,169
50%	678,597	682,742	623,907	547,394	413,143
60%	629,138	672,572	594,565	523,137	403,158
70%	378,338	492,577	567,452	500,925	384,743
80%	377,835	378,338	508,129	469,407	373,620
90%	366,054	366,217	425,645	436,189	357,375
Long Term					
Full Simulation Period[b]	582,690	598,696	596,103	540,655	423,270
Water Year Types[c]					
Wet (32%)	474,304	473,273	559,043	513,375	446,858
Above Normal (16%)	471,639	540,324	596,319	538,406	401,656
Below Normal (13%)	598,901	650,004	605,370	518,532	403,347
Dry (24%)	706,213	701,479	644,542	561,891	406,785
Critical (15%)	717,100	715,342	586,941	587,088	441,313

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	720,968	723,037	704,931	655,949	505,143
20%	719,865	721,139	687,047	623,626	487,919
30%	719,082	719,715	681,784	608,786	465,855
40%	704,091	705,722	665,418	593,817	450,304
50%	676,474	687,739	639,188	564,339	442,429
60%	649,239	674,930	613,477	539,091	424,453
70%	405,773	520,685	582,039	518,983	410,505
80%	378,338	378,382	534,323	496,351	391,138
90%	368,085	366,811	425,868	463,149	374,697
Long Term					
Full Simulation Period[b]	588,544	604,926	606,746	561,148	439,824
Water Year Types[c]					
Wet (32%)	483,657	472,669	563,662	520,206	451,712
Above Normal (16%)	493,151	563,710	600,140	561,398	419,184
Below Normal (13%)	606,522	680,363	624,160	557,080	422,316
Dry (24%)	706,776	695,357	662,013	592,096	427,794
Critical (15%)	705,611	716,263	599,179	601,732	472,524

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Feb	Mar	Apr	May	Jun
Probability of Exceedance[a]					
10%	-95	-11	-238	15,578	2,214
20%	130	18	-11	12,249	17,748
30%	566	880	1,171	18,369	18,668
40%	7,589	1,601	15,802	29,293	21,136
50%	-2,123	4,997	15,281	16,945	29,286
60%	20,102	2,358	18,913	15,954	21,294
70%	27,435	28,108	14,587	18,058	25,762
80%	503	44	26,194	26,944	17,518
90%	2,032	594	223	26,960	17,322
Long Term					
Full Simulation Period[b]	5,854	6,230	10,643	20,492	16,554
Water Year Types[c]					
Wet (32%)	9,353	-604	4,619	6,831	4,854
Above Normal (16%)	21,511	23,387	3,821	22,992	17,528
Below Normal (13%)	7,622	30,359	18,789	38,548	18,969
Dry (24%)	563	-6,121	17,472	30,205	21,009
Critical (15%)	-11,489	921	12,238	14,644	31,211

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.14. Sacramento River Keswick to Battle Creek Late-Fall-run Spawning WUA

Table C-14-1. Sacramento River Keswick to Battle Creek Late-Fall-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	1,373,663	1,373,957	1,372,279	1,346,058
20%	1,372,806	1,372,775	1,370,795	1,337,697
30%	1,372,163	1,371,576	1,368,337	1,332,370
40%	1,370,292	1,366,802	1,360,528	1,297,903
50%	1,352,214	1,327,455	1,343,695	1,258,711
60%	1,324,170	1,279,438	1,325,362	1,196,191
70%	964,111	749,022	995,339	1,110,692
80%	638,846	274,861	640,963	1,014,507
90%	314,049	142,068	367,831	799,017
Long Term				
Full Simulation Period[b]	1,084,735	995,045	1,093,858	1,151,806
Water Year Types[c]				
Wet (32%)	676,552	657,941	722,415	1,034,793
Above Normal (16%)	1,036,533	682,250	1,039,897	1,163,603
Below Normal (13%)	1,355,326	1,118,267	1,307,502	1,211,646
Dry (24%)	1,326,960	1,358,710	1,331,424	1,270,932
Critical (15%)	1,369,598	1,345,237	1,365,326	1,139,157

Alternative 1

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	1,373,346	1,374,047	1,372,103	1,344,717
20%	1,372,566	1,372,876	1,370,644	1,337,615
30%	1,371,579	1,371,382	1,367,225	1,326,824
40%	1,366,483	1,365,862	1,359,858	1,276,557
50%	1,338,877	1,328,598	1,333,196	1,220,222
60%	1,305,047	1,243,778	1,323,396	1,150,743
70%	878,678	587,948	936,580	1,081,824
80%	478,189	274,894	601,043	962,592
90%	308,533	140,818	360,694	801,193
Long Term				
Full Simulation Period[b]	1,040,207	980,783	1,076,918	1,134,536
Water Year Types[c]				
Wet (32%)	622,383	635,847	721,831	1,028,337
Above Normal (16%)	957,428	632,597	976,754	1,155,874
Below Normal (13%)	1,262,254	1,093,689	1,236,238	1,166,335
Dry (24%)	1,321,680	1,359,023	1,342,289	1,243,934
Critical (15%)	1,362,507	1,371,452	1,366,456	1,130,035

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	-316	90	-176	-1,341
20%	-241	101	-150	-83
30%	-584	-195	-1,113	-5,546
40%	-3,810	-941	-670	-21,346
50%	-13,337	1,143	-10,498	-38,490
60%	-19,123	-35,660	-1,965	-45,448
70%	-85,432	-161,074	-58,759	-28,869
80%	-160,657	34	-39,921	-51,915
90%	-5,516	-1,250	-7,137	2,176
Long Term				
Full Simulation Period[b]	-44,527	-14,262	-16,940	-17,270
Water Year Types[c]				
Wet (32%)	-54,169	-22,094	-584	-6,456
Above Normal (16%)	-79,105	-49,653	-63,143	-7,728
Below Normal (13%)	-93,073	-24,579	-71,265	-45,311
Dry (24%)	-5,281	313	10,865	-26,998
Critical (15%)	-7,090	26,215	1,130	-9,122

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-14-2. Sacramento River Keswick to Battle Creek Late-Fall-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	1,373,663	1,373,957	1,372,279	1,346,058
20%	1,372,806	1,372,775	1,370,795	1,337,697
30%	1,372,163	1,371,576	1,368,337	1,332,370
40%	1,370,292	1,366,802	1,360,528	1,297,903
50%	1,352,214	1,327,455	1,343,695	1,258,711
60%	1,324,170	1,279,438	1,325,362	1,196,191
70%	964,111	749,022	995,339	1,110,692
80%	638,846	274,861	640,963	1,014,507
90%	314,049	142,068	367,831	799,017
Long Term				
Full Simulation Period[b]	1,084,735	995,045	1,093,858	1,151,806
Water Year Types[c]				
Wet (32%)	676,552	657,941	722,415	1,034,793
Above Normal (16%)	1,036,533	682,250	1,039,897	1,163,603
Below Normal (13%)	1,355,326	1,118,267	1,307,502	1,211,646
Dry (24%)	1,326,960	1,358,710	1,331,424	1,270,932
Critical (15%)	1,369,598	1,345,237	1,365,326	1,139,157

Alternative 3

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	1,373,398	1,373,692	1,372,063	1,341,133
20%	1,372,679	1,372,781	1,371,039	1,337,075
30%	1,371,554	1,371,314	1,366,908	1,326,597
40%	1,369,986	1,367,043	1,356,858	1,293,435
50%	1,349,118	1,326,592	1,333,211	1,246,783
60%	1,324,343	1,155,701	1,323,404	1,179,621
70%	881,165	609,184	936,757	1,087,279
80%	479,877	274,900	601,603	969,688
90%	276,105	140,160	360,554	801,581
Long Term				
Full Simulation Period[b]	1,044,952	981,852	1,074,841	1,141,940
Water Year Types[c]				
Wet (32%)	619,462	635,884	721,838	1,029,376
Above Normal (16%)	978,283	650,283	972,042	1,161,401
Below Normal (13%)	1,263,106	1,094,324	1,235,965	1,173,958
Dry (24%)	1,326,900	1,366,202	1,338,755	1,259,055
Critical (15%)	1,369,183	1,346,970	1,363,491	1,140,203

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	-265	-265	-216	-4,925
20%	-128	6	245	-622
30%	-609	-262	-1,429	-5,772
40%	-307	241	-3,670	-4,468
50%	-3,096	-862	-10,483	-11,929
60%	174	-123,737	-1,958	-16,570
70%	-82,946	-139,838	-58,582	-23,413
80%	-158,969	39	-39,361	-44,819
90%	-37,944	-1,908	-7,278	2,564
Long Term				
Full Simulation Period[b]	-39,783	-13,193	-19,017	-9,866
Water Year Types[c]				
Wet (32%)	-57,089	-22,057	-577	-5,417
Above Normal (16%)	-58,250	-31,966	-67,855	-2,201
Below Normal (13%)	-92,220	-23,944	-71,537	-37,688
Dry (24%)	-61	7,492	7,331	-11,877
Critical (15%)	-414	1,733	-1,836	1,046

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-14-3. Sacramento River Keswick to Battle Creek Late-Fall-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	1,373,663	1,373,957	1,372,279	1,346,058
20%	1,372,806	1,372,775	1,370,795	1,337,697
30%	1,372,163	1,371,576	1,368,337	1,332,370
40%	1,370,292	1,366,802	1,360,528	1,297,903
50%	1,352,214	1,327,455	1,343,695	1,258,711
60%	1,324,170	1,279,438	1,325,362	1,196,191
70%	964,111	749,022	995,339	1,110,692
80%	638,846	274,861	640,963	1,014,507
90%	314,049	142,068	367,831	799,017
Long Term				
Full Simulation Period[b]	1,084,735	995,045	1,093,858	1,151,806
Water Year Types[c]				
Wet (32%)	676,552	657,941	722,415	1,034,793
Above Normal (16%)	1,036,533	682,250	1,039,897	1,163,603
Below Normal (13%)	1,355,326	1,118,267	1,307,502	1,211,646
Dry (24%)	1,326,960	1,358,710	1,331,424	1,270,932
Critical (15%)	1,369,598	1,345,237	1,365,326	1,139,157

Alternative 5

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	1,373,367	1,373,971	1,371,990	1,343,268
20%	1,372,688	1,372,784	1,370,189	1,337,510
30%	1,372,016	1,371,595	1,367,918	1,330,377
40%	1,369,960	1,366,769	1,360,447	1,297,745
50%	1,352,205	1,327,439	1,343,705	1,262,326
60%	1,324,011	1,279,403	1,325,352	1,196,249
70%	960,091	754,161	995,298	1,117,718
80%	640,957	274,863	641,024	1,015,128
90%	314,038	143,900	367,825	801,611
Long Term				
Full Simulation Period[b]	1,084,355	994,926	1,092,887	1,155,813
Water Year Types[c]				
Wet (32%)	676,959	658,587	721,912	1,034,767
Above Normal (16%)	1,034,519	682,434	1,038,156	1,163,679
Below Normal (13%)	1,354,300	1,117,011	1,306,596	1,206,288
Dry (24%)	1,326,967	1,357,825	1,329,768	1,280,043
Critical (15%)	1,369,235	1,345,452	1,365,256	1,156,239

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	-295	14	-289	-2,791
20%	-119	9	-606	-187
30%	-147	19	-419	-1,992
40%	-333	-33	-80	-159
50%	-9	-16	10	3,615
60%	-159	-35	-10	58
70%	-4,020	5,139	-41	7,025
80%	2,111	2	60	621
90%	-10	1,832	-7	2,594
Long Term				
Full Simulation Period[b]	-379	-119	-971	4,007
Water Year Types[c]				
Wet (32%)	407	646	-503	-27
Above Normal (16%)	-2,014	185	-1,741	76
Below Normal (13%)	-1,027	-1,257	-906	-5,358
Dry (24%)	6	-886	-1,656	9,111
Critical (15%)	-362	215	-70	17,082

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-14-4. Sacramento River Keswick to Battle Creek Late-Fall-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	1,373,346	1,374,047	1,372,103	1,344,717
20%	1,372,566	1,372,876	1,370,644	1,337,615
30%	1,371,579	1,371,382	1,367,225	1,326,824
40%	1,366,483	1,365,862	1,359,858	1,276,557
50%	1,338,877	1,328,598	1,333,196	1,220,222
60%	1,305,047	1,243,778	1,323,396	1,150,743
70%	878,678	587,948	936,580	1,081,824
80%	478,189	274,894	601,043	962,592
90%	308,533	140,818	360,694	801,193
Long Term				
Full Simulation Period[b]	1,040,207	980,783	1,076,918	1,134,536
Water Year Types[c]				
Wet (32%)	622,383	635,847	721,831	1,028,337
Above Normal (16%)	957,428	632,597	976,754	1,155,874
Below Normal (13%)	1,262,254	1,093,689	1,236,238	1,166,335
Dry (24%)	1,321,680	1,359,023	1,342,289	1,243,934
Critical (15%)	1,362,507	1,371,452	1,366,456	1,130,035

No Action Alternative

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	1,373,663	1,373,957	1,372,279	1,346,058
20%	1,372,806	1,372,775	1,370,795	1,337,697
30%	1,372,163	1,371,576	1,368,337	1,332,370
40%	1,370,292	1,366,802	1,360,528	1,297,903
50%	1,352,214	1,327,455	1,343,695	1,258,711
60%	1,324,170	1,279,438	1,325,362	1,196,191
70%	964,111	749,022	995,339	1,110,692
80%	638,846	274,861	640,963	1,014,507
90%	314,049	142,068	367,831	799,017
Long Term				
Full Simulation Period[b]	1,084,735	995,045	1,093,858	1,151,806
Water Year Types[c]				
Wet (32%)	676,552	657,941	722,415	1,034,793
Above Normal (16%)	1,036,533	682,250	1,039,897	1,163,603
Below Normal (13%)	1,355,326	1,118,267	1,307,502	1,211,646
Dry (24%)	1,326,960	1,358,710	1,331,424	1,270,932
Critical (15%)	1,369,598	1,345,237	1,365,326	1,139,157

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	316	-90	176	1,341
20%	241	-101	150	83
30%	584	195	1,113	5,546
40%	3,810	941	670	21,346
50%	13,337	-1,143	10,498	38,490
60%	19,123	35,660	1,965	45,448
70%	85,432	161,074	58,759	28,869
80%	160,657	-34	39,921	51,915
90%	5,516	1,250	7,137	-2,176
Long Term				
Full Simulation Period[b]	44,527	14,262	16,940	17,270
Water Year Types[c]				
Wet (32%)	54,169	22,094	584	6,456
Above Normal (16%)	79,105	49,653	63,143	7,728
Below Normal (13%)	93,073	24,579	71,265	45,311
Dry (24%)	5,281	-313	-10,865	26,998
Critical (15%)	7,090	-26,215	-1,130	9,122

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-14-5. Sacramento River Keswick to Battle Creek Late-Fall-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	1,373,346	1,374,047	1,372,103	1,344,717
20%	1,372,566	1,372,876	1,370,644	1,337,615
30%	1,371,579	1,371,382	1,367,225	1,326,824
40%	1,366,483	1,365,862	1,359,858	1,276,557
50%	1,338,877	1,328,598	1,333,196	1,220,222
60%	1,305,047	1,243,778	1,323,396	1,150,743
70%	878,678	587,948	936,580	1,081,824
80%	478,189	274,894	601,043	962,592
90%	308,533	140,818	360,694	801,193
Long Term				
Full Simulation Period[b]	1,040,207	980,783	1,076,918	1,134,536
Water Year Types[c]				
Wet (32%)	622,383	635,847	721,831	1,028,337
Above Normal (16%)	957,428	632,597	976,754	1,155,874
Below Normal (13%)	1,262,254	1,093,689	1,236,238	1,166,335
Dry (24%)	1,321,680	1,359,023	1,342,289	1,243,934
Critical (15%)	1,362,507	1,371,452	1,366,456	1,130,035

Alternative 3

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	1,373,398	1,373,692	1,372,063	1,341,133
20%	1,372,679	1,372,781	1,371,039	1,337,075
30%	1,371,554	1,371,314	1,366,908	1,326,597
40%	1,369,986	1,367,043	1,356,858	1,293,435
50%	1,349,118	1,326,592	1,333,211	1,246,783
60%	1,324,343	1,155,701	1,323,404	1,179,621
70%	881,165	609,184	936,757	1,087,279
80%	479,877	274,900	601,603	969,688
90%	276,105	140,160	360,554	801,581
Long Term				
Full Simulation Period[b]	1,044,952	981,852	1,074,841	1,141,940
Water Year Types[c]				
Wet (32%)	619,462	635,884	721,838	1,029,376
Above Normal (16%)	978,283	650,283	972,042	1,161,401
Below Normal (13%)	1,263,106	1,094,324	1,235,965	1,173,958
Dry (24%)	1,326,900	1,366,202	1,338,755	1,259,055
Critical (15%)	1,369,183	1,346,970	1,363,491	1,140,203

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	51	-355	-41	-3,584
20%	113	-95	395	-540
30%	-25	-67	-317	-227
40%	3,503	1,181	-3,000	16,878
50%	10,241	-2,006	15	26,561
60%	19,297	-88,077	7	28,879
70%	2,487	21,236	177	5,456
80%	1,688	6	560	7,095
90%	-32,428	-659	-140	388
Long Term				
Full Simulation Period[b]	4,745	1,069	-2,077	7,404
Water Year Types[c]				
Wet (32%)	-2,921	37	7	1,040
Above Normal (16%)	20,856	17,686	-4,712	5,527
Below Normal (13%)	852	635	-273	7,623
Dry (24%)	5,220	7,179	-3,534	15,121
Critical (15%)	6,676	-24,482	-2,965	10,168

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-14-6. Sacramento River Keswick to Battle Creek Late-Fall-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	1,373,346	1,374,047	1,372,103	1,344,717
20%	1,372,566	1,372,876	1,370,644	1,337,615
30%	1,371,579	1,371,382	1,367,225	1,326,824
40%	1,366,483	1,365,862	1,359,858	1,276,557
50%	1,338,877	1,328,598	1,333,196	1,220,222
60%	1,305,047	1,243,778	1,323,396	1,150,743
70%	878,678	587,948	936,580	1,081,824
80%	478,189	274,894	601,043	962,592
90%	308,533	140,818	360,694	801,193
Long Term				
Full Simulation Period[b]	1,040,207	980,783	1,076,918	1,134,536
Water Year Types[c]				
Wet (32%)	622,383	635,847	721,831	1,028,337
Above Normal (16%)	957,428	632,597	976,754	1,155,874
Below Normal (13%)	1,262,254	1,093,689	1,236,238	1,166,335
Dry (24%)	1,321,680	1,359,023	1,342,289	1,243,934
Critical (15%)	1,362,507	1,371,452	1,366,456	1,130,035

Alternative 5

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	1,373,367	1,373,971	1,371,990	1,343,268
20%	1,372,688	1,372,784	1,370,189	1,337,510
30%	1,372,016	1,371,595	1,367,918	1,330,377
40%	1,369,960	1,366,769	1,360,447	1,297,745
50%	1,352,205	1,327,439	1,343,705	1,262,326
60%	1,324,011	1,279,403	1,325,352	1,196,249
70%	960,091	754,161	995,298	1,117,718
80%	640,957	274,863	641,024	1,015,128
90%	314,038	143,900	367,825	801,611
Long Term				
Full Simulation Period[b]	1,084,355	994,926	1,092,887	1,155,813
Water Year Types[c]				
Wet (32%)	676,959	658,587	721,912	1,034,767
Above Normal (16%)	1,034,519	682,434	1,038,156	1,163,679
Below Normal (13%)	1,354,300	1,117,011	1,306,596	1,206,288
Dry (24%)	1,326,967	1,357,825	1,329,768	1,280,043
Critical (15%)	1,369,235	1,345,452	1,365,256	1,156,239

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)			
Statistic	Jan	Feb	Mar	Apr
Probability of Exceedance[a]				
10%	21	-76	-114	-1,450
20%	122	-92	-455	-105
30%	437	214	693	3,553
40%	3,477	908	589	21,188
50%	13,328	-1,159	10,509	42,105
60%	18,964	35,624	1,956	45,506
70%	81,412	166,213	58,718	35,894
80%	162,768	-31	39,981	52,535
90%	5,505	3,082	7,131	418
Long Term				
Full Simulation Period[b]	44,148	14,143	15,969	21,277
Water Year Types[c]				
Wet (32%)	54,576	22,741	82	6,430
Above Normal (16%)	77,092	49,837	61,402	7,805
Below Normal (13%)	92,046	23,322	70,358	39,953
Dry (24%)	5,287	-1,198	-12,520	36,109
Critical (15%)	6,728	-26,000	-1,200	26,204

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.15. Sacramento River Keswick to Battle Creek Late-Fall-run Fry Rearing WUA

Table C-15-1. Sacramento River Keswick to Battle Creek Late-Fall-run Fry Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)		
Statistic	Apr	May	Jun
Probability of Exceedance[a]			
10%	1,704,398	1,525,979	1,070,585
20%	1,675,996	1,373,240	1,042,603
30%	1,639,252	1,308,087	1,028,934
40%	1,561,822	1,248,326	1,015,314
50%	1,442,854	1,168,815	998,407
60%	1,314,000	1,103,230	997,255
70%	1,215,575	1,049,304	996,238
80%	1,143,655	1,026,181	995,116
90%	1,001,200	997,289	993,132
Long Term			
Full Simulation Period[b]	1,406,784	1,215,348	1,020,541
Water Year Types[c]			
Wet (32%)	1,362,874	1,143,915	1,016,440
Above Normal (16%)	1,388,023	1,207,032	1,011,268
Below Normal (13%)	1,414,040	1,186,118	1,027,313
Dry (24%)	1,527,772	1,291,345	1,020,786
Critical (15%)	1,313,945	1,279,260	1,032,854

Alternative 1

	Monthly WUA (Feet2)		
Statistic	Apr	May	Jun
Probability of Exceedance[a]			
10%	1,699,282	1,451,007	1,130,575
20%	1,672,062	1,309,717	1,070,494
30%	1,629,842	1,247,589	1,041,374
40%	1,488,708	1,172,513	1,028,459
50%	1,363,696	1,132,680	1,015,164
60%	1,257,370	1,076,987	997,074
70%	1,185,113	1,029,370	996,393
80%	1,115,017	1,004,746	996,075
90%	999,499	997,466	993,157
Long Term			
Full Simulation Period[b]	1,375,624	1,176,654	1,033,253
Water Year Types[c]			
Wet (32%)	1,345,856	1,131,139	1,016,301
Above Normal (16%)	1,372,136	1,152,491	1,035,900
Below Normal (13%)	1,349,078	1,100,094	1,066,930
Dry (24%)	1,479,128	1,237,536	1,031,327
Critical (15%)	1,295,729	1,270,153	1,039,453

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)		
Statistic	Apr	May	Jun
Probability of Exceedance[a]			
10%	-5,116	-74,972	59,990
20%	-3,934	-63,523	27,891
30%	-9,410	-60,498	12,440
40%	-73,114	-75,813	13,146
50%	-79,158	-36,135	16,757
60%	-56,630	-26,243	-181
70%	-30,462	-19,934	154
80%	-28,638	-21,435	959
90%	-1,700	177	25
Long Term			
Full Simulation Period[b]	-31,159	-38,694	12,712
Water Year Types[c]			
Wet (32%)	-17,018	-12,776	-139
Above Normal (16%)	-15,887	-54,541	24,632
Below Normal (13%)	-64,962	-86,024	39,616
Dry (24%)	-48,644	-53,809	10,541
Critical (15%)	-18,216	-9,107	6,600

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-15-2. Sacramento River Keswick to Battle Creek Late-Fall-run Fry Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)		
Statistic	Apr	May	Jun
Probability of Exceedance[a]			
10%	1,704,398	1,525,979	1,070,585
20%	1,675,996	1,373,240	1,042,603
30%	1,639,252	1,308,087	1,028,934
40%	1,561,822	1,248,326	1,015,314
50%	1,442,854	1,168,815	998,407
60%	1,314,000	1,103,230	997,255
70%	1,215,575	1,049,304	996,238
80%	1,143,655	1,026,181	995,116
90%	1,001,200	997,289	993,132
Long Term			
Full Simulation Period[b]	1,406,784	1,215,348	1,020,541
Water Year Types[c]			
Wet (32%)	1,362,874	1,143,915	1,016,440
Above Normal (16%)	1,388,023	1,207,032	1,011,268
Below Normal (13%)	1,414,040	1,186,118	1,027,313
Dry (24%)	1,527,772	1,291,345	1,020,786
Critical (15%)	1,313,945	1,279,260	1,032,854

Alternative 3

	Monthly WUA (Feet2)		
Statistic	Apr	May	Jun
Probability of Exceedance[a]			
10%	1,699,140	1,441,600	1,109,785
20%	1,669,589	1,314,038	1,070,266
30%	1,629,868	1,246,095	1,041,475
40%	1,544,685	1,178,162	1,025,730
50%	1,404,938	1,137,924	1,011,028
60%	1,283,871	1,071,084	996,746
70%	1,191,706	1,030,315	996,309
80%	1,129,631	1,004,945	995,946
90%	999,948	996,701	993,582
Long Term			
Full Simulation Period[b]	1,389,330	1,178,084	1,031,592
Water Year Types[c]			
Wet (32%)	1,349,922	1,131,098	1,018,019
Above Normal (16%)	1,384,080	1,141,651	1,025,863
Below Normal (13%)	1,362,401	1,101,418	1,063,293
Dry (24%)	1,505,255	1,250,013	1,033,157
Critical (15%)	1,311,877	1,269,749	1,035,542

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)		
Statistic	Apr	May	Jun
Probability of Exceedance[a]			
10%	-5,258	-84,379	39,200
20%	-6,408	-59,202	27,663
30%	-9,384	-61,992	12,541
40%	-17,137	-70,164	10,416
50%	-37,916	-30,891	12,621
60%	-30,129	-32,147	-509
70%	-23,869	-18,989	71
80%	-14,024	-21,236	830
90%	-1,251	-588	450
Long Term			
Full Simulation Period[b]	-17,454	-37,264	11,052
Water Year Types[c]			
Wet (32%)	-12,953	-12,818	1,579
Above Normal (16%)	-3,943	-65,381	14,595
Below Normal (13%)	-51,639	-84,700	35,980
Dry (24%)	-22,518	-41,332	12,372
Critical (15%)	-2,067	-9,511	2,688

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-15-3. Sacramento River Keswick to Battle Creek Late-Fall-run Fry Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)		
Statistic	Apr	May	Jun
Probability of Exceedance[a]			
10%	1,704,398	1,525,979	1,070,585
20%	1,675,996	1,373,240	1,042,603
30%	1,639,252	1,308,087	1,028,934
40%	1,561,822	1,248,326	1,015,314
50%	1,442,854	1,168,815	998,407
60%	1,314,000	1,103,230	997,255
70%	1,215,575	1,049,304	996,238
80%	1,143,655	1,026,181	995,116
90%	1,001,200	997,289	993,132
Long Term			
Full Simulation Period[b]	1,406,784	1,215,348	1,020,541
Water Year Types[c]			
Wet (32%)	1,362,874	1,143,915	1,016,440
Above Normal (16%)	1,388,023	1,207,032	1,011,268
Below Normal (13%)	1,414,040	1,186,118	1,027,313
Dry (24%)	1,527,772	1,291,345	1,020,786
Critical (15%)	1,313,945	1,279,260	1,032,854

Alternative 5

	Monthly WUA (Feet2)		
Statistic	Apr	May	Jun
Probability of Exceedance[a]			
10%	1,699,450	1,522,613	1,068,763
20%	1,671,627	1,373,318	1,043,471
30%	1,639,255	1,308,808	1,030,261
40%	1,561,402	1,261,851	1,016,778
50%	1,443,429	1,175,321	999,758
60%	1,315,410	1,114,991	997,213
70%	1,222,612	1,072,760	996,224
80%	1,143,865	1,033,746	995,736
90%	1,019,494	1,011,013	993,137
Long Term			
Full Simulation Period[b]	1,409,320	1,225,548	1,020,719
Water Year Types[c]			
Wet (32%)	1,362,798	1,143,533	1,016,438
Above Normal (16%)	1,388,002	1,218,954	1,010,242
Below Normal (13%)	1,402,322	1,186,604	1,024,597
Dry (24%)	1,541,724	1,310,012	1,021,502
Critical (15%)	1,318,954	1,305,318	1,036,482

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)		
Statistic	Apr	May	Jun
Probability of Exceedance[a]			
10%	-4,949	-3,366	-1,822
20%	-4,369	78	868
30%	3	721	1,327
40%	-420	13,525	1,464
50%	575	6,506	1,351
60%	1,410	11,760	-42
70%	7,037	23,456	-14
80%	210	7,565	620
90%	18,295	13,724	5
Long Term			
Full Simulation Period[b]	2,537	10,200	178
Water Year Types[c]			
Wet (32%)	-76	-382	-2
Above Normal (16%)	-21	11,922	-1,026
Below Normal (13%)	-11,718	486	-2,717
Dry (24%)	13,952	18,667	716
Critical (15%)	5,010	26,058	3,629

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-15-4. Sacramento River Keswick to Battle Creek Late-Fall-run Fry Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)		
Statistic	Apr	May	Jun
Probability of Exceedance[a]			
10%	1,699,282	1,451,007	1,130,575
20%	1,672,062	1,309,717	1,070,494
30%	1,629,842	1,247,589	1,041,374
40%	1,488,708	1,172,513	1,028,459
50%	1,363,696	1,132,680	1,015,164
60%	1,257,370	1,076,987	997,074
70%	1,185,113	1,029,370	996,393
80%	1,115,017	1,004,746	996,075
90%	999,499	997,466	993,157
Long Term			
Full Simulation Period[b]	1,375,624	1,176,654	1,033,253
Water Year Types[c]			
Wet (32%)	1,345,856	1,131,139	1,016,301
Above Normal (16%)	1,372,136	1,152,491	1,035,900
Below Normal (13%)	1,349,078	1,100,094	1,066,930
Dry (24%)	1,479,128	1,237,536	1,031,327
Critical (15%)	1,295,729	1,270,153	1,039,453

No Action Alternative

	Monthly WUA (Feet2)		
Statistic	Apr	May	Jun
Probability of Exceedance[a]			
10%	1,704,398	1,525,979	1,070,585
20%	1,675,996	1,373,240	1,042,603
30%	1,639,252	1,308,087	1,028,934
40%	1,561,822	1,248,326	1,015,314
50%	1,442,854	1,168,815	998,407
60%	1,314,000	1,103,230	997,255
70%	1,215,575	1,049,304	996,238
80%	1,143,655	1,026,181	995,116
90%	1,001,200	997,289	993,132
Long Term			
Full Simulation Period[b]	1,406,784	1,215,348	1,020,541
Water Year Types[c]			
Wet (32%)	1,362,874	1,143,915	1,016,440
Above Normal (16%)	1,388,023	1,207,032	1,011,268
Below Normal (13%)	1,414,040	1,186,118	1,027,313
Dry (24%)	1,527,772	1,291,345	1,020,786
Critical (15%)	1,313,945	1,279,260	1,032,854

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)		
Statistic	Apr	May	Jun
Probability of Exceedance[a]			
10%	5,116	74,972	-59,990
20%	3,934	63,523	-27,891
30%	9,410	60,498	-12,440
40%	73,114	75,813	-13,146
50%	79,158	36,135	-16,757
60%	56,630	26,243	181
70%	30,462	19,934	-154
80%	28,638	21,435	-959
90%	1,700	-177	-25
Long Term			
Full Simulation Period[b]	31,159	38,694	-12,712
Water Year Types[c]			
Wet (32%)	17,018	12,776	139
Above Normal (16%)	15,887	54,541	-24,632
Below Normal (13%)	64,962	86,024	-39,616
Dry (24%)	48,644	53,809	-10,541
Critical (15%)	18,216	9,107	-6,600

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-15-5. Sacramento River Keswick to Battle Creek Late-Fall-run Fry Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)		
Statistic	Apr	May	Jun
Probability of Exceedance[a]			
10%	1,699,282	1,451,007	1,130,575
20%	1,672,062	1,309,717	1,070,494
30%	1,629,842	1,247,589	1,041,374
40%	1,488,708	1,172,513	1,028,459
50%	1,363,696	1,132,680	1,015,164
60%	1,257,370	1,076,987	997,074
70%	1,185,113	1,029,370	996,393
80%	1,115,017	1,004,746	996,075
90%	999,499	997,466	993,157
Long Term			
Full Simulation Period[b]	1,375,624	1,176,654	1,033,253
Water Year Types[c]			
Wet (32%)	1,345,856	1,131,139	1,016,301
Above Normal (16%)	1,372,136	1,152,491	1,035,900
Below Normal (13%)	1,349,078	1,100,094	1,066,930
Dry (24%)	1,479,128	1,237,536	1,031,327
Critical (15%)	1,295,729	1,270,153	1,039,453

Alternative 3

	Monthly WUA (Feet2)		
Statistic	Apr	May	Jun
Probability of Exceedance[a]			
10%	1,699,140	1,441,600	1,109,785
20%	1,669,589	1,314,038	1,070,266
30%	1,629,868	1,246,095	1,041,475
40%	1,544,685	1,178,162	1,025,730
50%	1,404,938	1,137,924	1,011,028
60%	1,283,871	1,071,084	996,746
70%	1,191,706	1,030,315	996,309
80%	1,129,631	1,004,945	995,946
90%	999,948	996,701	993,582
Long Term			
Full Simulation Period[b]	1,389,330	1,178,084	1,031,592
Water Year Types[c]			
Wet (32%)	1,349,922	1,131,098	1,018,019
Above Normal (16%)	1,384,080	1,141,651	1,025,863
Below Normal (13%)	1,362,401	1,101,418	1,063,293
Dry (24%)	1,505,255	1,250,013	1,033,157
Critical (15%)	1,311,877	1,269,749	1,035,542

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)		
Statistic	Apr	May	Jun
Probability of Exceedance[a]			
10%	-142	-9,407	-20,790
20%	-2,473	4,321	-227
30%	26	-1,494	101
40%	55,977	5,649	-2,729
50%	41,242	5,244	-4,137
60%	26,502	-5,903	-328
70%	6,593	945	-84
80%	14,614	198	-130
90%	449	-765	425
Long Term			
Full Simulation Period[b]	13,705	1,430	-1,660
Water Year Types[c]			
Wet (32%)	4,065	-42	1,718
Above Normal (16%)	11,944	-10,839	-10,038
Below Normal (13%)	13,323	1,324	-3,637
Dry (24%)	26,126	12,477	1,831
Critical (15%)	16,148	-404	-3,911

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-15-6. Sacramento River Keswick to Battle Creek Late-Fall-run Fry Rearing WUA, Monthly WUA

Second Basis of Comparison

Statistic	Monthly WUA (Feet2) Apr	May	Jun
Probability of Exceedance[a]			
10%	1,699,282	1,451,007	1,130,575
20%	1,672,062	1,309,717	1,070,494
30%	1,629,842	1,247,589	1,041,374
40%	1,488,708	1,172,513	1,028,459
50%	1,363,696	1,132,680	1,015,164
60%	1,257,370	1,076,987	997,074
70%	1,185,113	1,029,370	996,393
80%	1,115,017	1,004,746	996,075
90%	999,499	997,466	993,157
Long Term			
Full Simulation Period[b]	1,375,624	1,176,654	1,033,253
Water Year Types[c]			
Wet (32%)	1,345,856	1,131,139	1,016,301
Above Normal (16%)	1,372,136	1,152,491	1,035,900
Below Normal (13%)	1,349,078	1,100,094	1,066,930
Dry (24%)	1,479,128	1,237,536	1,031,327
Critical (15%)	1,295,729	1,270,153	1,039,453

Alternative 5

Statistic	Monthly WUA (Feet2) Apr	May	Jun
Probability of Exceedance[a]			
10%	1,699,450	1,522,613	1,068,763
20%	1,671,627	1,373,318	1,043,471
30%	1,639,255	1,308,808	1,030,261
40%	1,561,402	1,261,851	1,016,778
50%	1,443,429	1,175,321	999,758
60%	1,315,410	1,114,991	997,213
70%	1,222,612	1,072,760	996,224
80%	1,143,865	1,033,746	995,736
90%	1,019,494	1,011,013	993,137
Long Term			
Full Simulation Period[b]	1,409,320	1,225,548	1,020,719
Water Year Types[c]			
Wet (32%)	1,362,798	1,143,533	1,016,438
Above Normal (16%)	1,388,002	1,218,954	1,010,242
Below Normal (13%)	1,402,322	1,186,604	1,024,597
Dry (24%)	1,541,724	1,310,012	1,021,502
Critical (15%)	1,318,954	1,305,318	1,036,482

Alternative 5 minus Second Basis of Comparison

Statistic	Monthly WUA (Feet2) Apr	May	Jun
Probability of Exceedance[a]			
10%	167	71,607	-61,812
20%	-435	63,601	-27,022
30%	9,413	61,219	-11,113
40%	72,694	89,338	-11,681
50%	79,733	42,641	-15,406
60%	58,040	38,003	139
70%	37,499	43,390	-168
80%	28,848	28,999	-339
90%	19,995	13,547	-20
Long Term			
Full Simulation Period[b]	33,696	48,895	-12,534
Water Year Types[c]			
Wet (32%)	16,942	12,394	137
Above Normal (16%)	15,866	66,463	-25,658
Below Normal (13%)	53,244	86,510	-42,333
Dry (24%)	62,596	72,476	-9,825
Critical (15%)	23,225	35,165	-2,971

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.16. Sacramento River Keswick to Battle Creek Late-Fall-run Juvenile Rearing WUA

Table C-16-1. Sacramento River Keswick to Battle Creek Late-Fall-run Juvenile Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	623,017	640,157	652,600	652,782	653,060	654,821	638,223	598,502	468,287	396,846	487,670	631,203
20%	608,964	627,361	651,728	652,034	652,022	653,160	625,399	569,781	453,799	372,279	457,103	627,109
30%	592,596	617,768	640,097	650,917	651,309	651,873	620,307	557,249	433,121	357,876	449,228	621,851
40%	569,681	591,980	628,239	634,602	638,736	640,153	606,281	540,739	421,483	353,494	434,268	598,046
50%	553,399	550,443	627,600	625,993	615,621	625,590	582,839	516,749	408,991	346,607	419,803	562,368
60%	519,004	504,464	619,625	613,032	591,952	614,289	561,202	494,080	397,738	341,063	410,523	451,247
70%	495,388	451,681	572,193	469,580	388,749	482,898	533,465	474,076	383,427	338,001	399,485	399,889
80%	472,912	397,683	420,509	382,314	381,803	382,314	492,785	450,610	370,909	337,330	393,522	362,028
90%	448,945	369,808	365,251	357,222	365,681	357,245	398,511	423,428	353,672	337,030	378,610	337,148
Long Term												
Full Simulation Period[b]	541,118	524,717	568,224	556,400	543,976	555,952	554,329	511,414	410,786	357,892	426,691	507,331
Water Year Types[c]												
Wet (32%)	518,114	493,252	470,475	445,144	459,091	445,636	520,129	481,798	422,595	356,550	413,504	365,976
Above Normal (16%)	546,717	515,815	556,051	523,083	465,969	519,637	549,977	513,416	393,375	340,830	405,409	450,866
Below Normal (13%)	526,010	516,768	624,530	634,608	555,374	619,378	572,781	511,898	397,461	343,587	402,505	590,171
Dry (24%)	547,318	537,651	630,043	624,925	641,243	632,188	599,317	530,323	401,623	361,894	453,080	615,516
Critical (15%)	588,413	588,267	638,560	647,649	639,843	649,110	541,246	541,457	431,547	385,727	456,509	618,527

Alternative 1

	Monthly WUA (Feet2)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	627,314	641,040	652,512	652,733	653,080	654,822	638,489	584,219	468,041	398,186	484,130	632,785
20%	620,501	627,412	650,227	652,132	651,892	653,142	624,779	559,782	439,150	374,923	454,453	627,463
30%	598,656	624,087	633,954	651,054	650,792	651,205	619,268	542,266	418,605	355,461	442,241	623,230
40%	581,741	618,898	628,284	630,852	632,726	638,835	592,215	519,981	402,312	351,960	422,630	599,655
50%	561,184	593,820	627,200	621,443	617,490	621,027	570,216	504,502	388,150	346,185	408,810	590,877
60%	545,037	579,387	620,586	601,842	574,446	612,216	545,628	484,947	379,372	340,190	396,894	578,960
70%	491,132	561,227	544,145	431,586	382,314	458,197	522,580	466,285	363,895	337,801	388,249	564,451
80%	468,879	516,863	390,190	382,314	373,984	378,237	472,169	438,510	354,203	337,491	372,100	550,661
90%	451,961	480,391	357,486	356,586	355,544	356,789	399,242	408,705	340,207	337,033	357,605	444,323
Long Term												
Full Simulation Period[b]	548,320	574,360	562,186	541,895	539,127	550,228	546,878	499,145	397,563	357,485	416,477	572,650
Water Year Types[c]												
Wet (32%)	535,032	559,211	444,754	432,266	451,323	446,173	515,862	475,686	418,495	358,149	392,771	522,675
Above Normal (16%)	551,560	557,478	571,041	498,137	448,017	499,290	546,681	497,402	378,407	339,460	389,699	564,823
Below Normal (13%)	530,312	559,201	621,306	595,532	549,245	592,090	554,853	480,249	380,126	342,104	383,786	587,659
Dry (24%)	542,744	597,645	631,532	622,456	640,538	636,651	588,089	517,335	383,022	357,543	456,870	610,962
Critical (15%)	599,404	600,561	637,255	643,393	649,778	648,454	538,299	538,867	413,182	389,577	459,496	611,796

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	4,297	882	-88	-49	20	1	266	-14,282	-246	1,340	-3,540	1,582
20%	11,537	51	-1,501	98	-130	-19	-620	-10,000	-14,649	2,644	-2,650	353
30%	6,059	6,319	-6,144	137	-517	-668	-1,039	-14,983	-14,516	-2,415	-6,986	1,379
40%	12,061	26,918	45	-3,750	-6,009	-1,318	-14,066	-20,758	-19,171	-1,534	-11,638	1,609
50%	7,784	43,377	-400	-4,549	1,870	-4,563	-12,623	-12,247	-20,842	-422	-10,993	28,510
60%	26,033	74,923	961	-11,190	-17,507	-2,073	-15,574	-9,134	-18,367	-872	-13,630	127,712
70%	-4,256	109,546	-28,048	-37,995	-6,435	-24,700	-10,885	-7,791	-19,532	-200	-11,237	164,561
80%	-4,032	119,180	-30,319	0	-7,820	-4,077	-20,616	-12,101	-16,706	161	-21,422	188,633
90%	3,015	110,584	-7,765	-636	-10,137	-456	732	-14,723	-13,465	3	-21,005	107,175
Long Term												
Full Simulation Period[b]	7,202	49,643	-6,039	-14,505	-4,849	-5,723	-7,450	-12,269	-13,222	-407	-10,214	65,319
Water Year Types[c]												
Wet (32%)	16,918	65,959	-25,721	-12,878	-7,768	538	-4,267	-6,112	-4,100	1,599	-20,733	156,700
Above Normal (16%)	4,844	41,662	14,990	-24,946	-17,952	-20,347	-3,296	-16,014	-14,968	-1,369	-15,711	113,957
Below Normal (13%)	4,302	42,433	-3,223	-39,076	-6,129	-27,288	-17,928	-31,649	-17,335	-1,483	-18,719	-2,512
Dry (24%)	-4,574	59,994	1,490	-2,469	-706	4,463	-11,228	-12,988	-18,600	-4,351	3,790	-4,553
Critical (15%)	10,991	12,294	-1,305	-4,256	9,935	-656	-2,947	-2,590	-18,364	3,850	2,988	-6,731

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

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No Action Alternative

Statistic	Monthly WUA (Feet2)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	623,017	640,157	652,600	652,782	653,060	654,821	638,223	598,502	468,287	396,846	487,670	631,203
20%	608,964	627,361	651,728	652,034	652,022	653,160	625,399	569,781	453,799	372,279	457,103	627,109
30%	592,596	617,768	640,097	650,917	651,309	651,873	620,307	557,249	433,121	357,876	449,228	621,851
40%	569,681	591,980	628,239	634,602	638,736	640,153	606,281	540,739	421,483	353,494	434,268	598,046
50%	553,399	550,443	627,600	625,993	615,621	625,590	582,839	516,749	408,991	346,607	419,803	562,368
60%	519,004	504,464	619,625	613,032	591,952	614,289	561,202	494,080	397,738	341,063	410,523	451,247
70%	495,388	451,681	572,193	469,580	388,749	482,898	533,465	474,076	383,427	338,001	399,485	399,889
80%	472,912	397,683	420,509	382,314	381,803	382,314	492,785	450,610	370,909	337,330	393,522	362,028
90%	448,945	369,808	365,251	357,222	365,681	357,245	398,511	423,428	353,672	337,030	378,610	337,148
Long Term												
Full Simulation Period[b]	541,118	524,717	568,224	556,400	543,976	555,952	554,329	511,414	410,786	357,892	426,691	507,331
Water Year Types[c]												
Wet (32%)	518,114	493,252	470,475	445,144	459,091	445,636	520,129	481,798	422,595	356,550	413,504	365,976
Above Normal (16%)	546,717	515,815	556,051	523,083	465,969	519,637	549,977	513,416	393,375	340,830	405,409	450,866
Below Normal (13%)	526,010	516,768	624,530	634,608	555,374	619,378	572,781	511,898	397,461	343,587	402,505	590,171
Dry (24%)	547,318	537,651	630,043	624,925	641,243	632,188	599,317	530,323	401,623	361,894	453,080	615,516
Critical (15%)	588,413	588,267	638,560	647,649	639,843	649,110	541,246	541,457	431,547	385,727	456,509	618,527

Alternative 3

Statistic	Monthly WUA (Feet2)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	625,570	641,309	652,444	652,846	652,996	654,825	638,393	582,323	468,123	397,479	466,050	630,200
20%	614,404	627,467	649,812	652,206	652,137	652,932	624,578	560,781	434,276	373,122	454,455	627,070
30%	597,586	625,943	634,879	651,219	651,204	651,079	619,272	541,909	416,710	360,392	433,033	618,125
40%	581,893	619,639	627,956	633,765	638,809	639,429	602,830	522,451	399,977	352,796	422,905	603,775
50%	562,752	599,992	626,357	624,942	615,572	621,038	576,101	505,210	391,599	343,164	416,813	585,102
60%	531,052	584,525	615,117	613,215	545,336	612,223	554,446	485,675	383,022	339,611	399,564	573,021
70%	498,299	559,956	549,776	432,866	382,314	458,297	524,856	457,541	366,856	338,011	390,515	552,754
80%	467,395	534,288	384,267	382,314	381,812	378,234	475,919	437,895	352,898	337,495	382,017	499,503
90%	448,508	479,273	357,580	356,658	355,534	356,793	399,417	407,546	344,014	337,198	371,616	455,756
Long Term												
Full Simulation Period[b]	544,915	577,306	561,379	544,567	539,928	550,052	549,986	499,146	398,468	357,817	417,529	563,464
Water Year Types[c]												
Wet (32%)	536,885	561,677	446,693	432,550	451,342	446,178	516,714	475,365	415,742	357,023	401,044	514,123
Above Normal (16%)	546,233	554,439	569,510	505,602	455,570	500,390	549,068	494,812	381,580	340,437	398,604	565,605
Below Normal (13%)	533,793	569,799	621,726	596,109	547,839	592,724	558,253	481,818	383,782	342,955	392,182	535,271
Dry (24%)	531,911	596,784	626,880	624,926	645,199	634,917	594,273	518,348	384,515	356,723	445,670	612,401
Critical (15%)	592,757	610,361	636,566	648,305	640,551	648,351	541,680	539,247	416,052	393,812	450,085	612,329

Alternative 3 minus No Action Alternative

Statistic	Monthly WUA (Feet2)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	2,553	1,152	-156	64	-64	4	170	-16,178	-164	633	-21,620	-1,002
20%	5,440	106	-1,916	172	114	-229	-820	-9,000	-19,522	843	-2,648	-39
30%	4,990	8,175	-5,218	302	-104	-794	-1,035	-15,340	-16,410	2,516	-16,195	-3,727
40%	12,212	27,659	-283	-836	73	-724	-3,452	-18,288	-21,506	-698	-11,363	5,729
50%	9,353	49,549	-1,243	-1,050	-49	-4,552	-6,739	-11,538	-17,392	-3,442	-2,990	22,734
60%	12,048	80,061	-4,508	183	-46,617	-2,065	-6,755	-8,405	-14,716	-1,452	-10,959	121,774
70%	2,911	108,275	-22,416	-36,714	-6,435	-24,601	-8,609	-16,536	-16,570	10	-8,970	152,864
80%	-5,516	136,604	-36,242	0	8	-4,080	-16,866	-12,716	-18,011	165	-11,505	137,475
90%	-437	109,465	-7,671	-564	-10,147	-452	906	-15,882	-9,658	168	-6,995	118,607
Long Term												
Full Simulation Period[b]	3,797	52,589	-6,846	-11,833	-4,048	-5,900	-4,343	-12,268	-12,318	-75	-9,162	56,133
Water Year Types[c]												
Wet (32%)	18,771	68,425	-23,782	-12,594	-7,749	543	-3,416	-6,433	-6,853	473	-12,460	148,147
Above Normal (16%)	-484	38,624	13,459	-17,480	-10,399	-19,246	-909	-18,604	-11,795	-392	-6,806	114,740
Below Normal (13%)	7,782	53,031	-2,804	-38,499	-7,534	-26,654	-14,528	-30,081	-13,679	-632	-10,323	-54,900
Dry (24%)	-15,408	59,133	-3,162	1	3,956	2,729	-5,045	-11,975	-17,108	-5,171	-7,410	-3,115
Critical (15%)	4,343	22,094	-1,994	656	708	-759	434	-2,210	-15,494	8,085	-6,423	-6,199

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-16-3. Sacramento River Keswick to Battle Creek Late-Fall-run Juvenile Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	623,017	640,157	652,600	652,782	653,060	654,821	638,223	598,502	468,287	396,846	487,670	631,203
20%	608,964	627,361	651,728	652,034	652,022	653,160	625,399	569,781	453,799	372,279	457,103	627,109
30%	592,596	617,768	640,097	650,917	651,309	651,873	620,307	557,249	433,121	357,876	449,228	621,851
40%	569,681	591,980	628,239	634,602	638,736	640,153	606,281	540,739	421,483	353,494	434,268	598,046
50%	553,399	550,443	627,600	625,993	615,621	625,590	582,839	516,749	408,991	346,607	419,803	562,368
60%	519,004	504,464	619,625	613,032	591,952	614,289	561,202	494,080	397,738	341,063	410,523	451,247
70%	495,388	451,681	572,193	469,580	388,749	482,898	533,465	474,076	383,427	338,001	399,485	399,889
80%	472,912	397,683	420,509	382,314	381,803	382,314	492,785	450,610	370,909	337,330	393,522	362,028
90%	448,945	369,808	365,251	357,222	365,681	357,245	398,511	423,428	353,672	337,030	378,610	337,148
Long Term												
Full Simulation Period[b]	541,118	524,717	568,224	556,400	543,976	555,952	554,329	511,414	410,786	357,892	426,691	507,331
Water Year Types[c]												
Wet (32%)	518,114	493,252	470,475	445,144	459,091	445,636	520,129	481,798	422,595	356,550	413,504	365,976
Above Normal (16%)	546,717	515,815	556,051	523,083	465,969	519,637	549,977	513,416	393,375	340,830	405,409	450,866
Below Normal (13%)	526,010	516,768	624,530	634,608	555,374	619,378	572,781	511,898	397,461	343,587	402,505	590,171
Dry (24%)	547,318	537,651	630,043	624,925	641,243	632,188	599,317	530,323	401,623	361,894	453,080	615,516
Critical (15%)	588,413	588,267	638,560	647,649	639,843	649,110	541,246	541,457	431,547	385,727	456,509	618,527

Alternative 5

	Monthly WUA (Feet2)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	620,475	641,717	652,600	652,835	653,029	654,812	638,242	597,811	469,943	397,637	481,403	628,192
20%	598,750	627,402	651,696	652,087	652,025	653,157	625,050	569,803	454,857	372,652	460,452	625,345
30%	590,231	619,431	640,161	651,147	651,301	651,867	620,307	557,448	435,336	355,023	438,636	610,336
40%	567,616	596,161	628,238	634,417	638,734	639,419	606,196	544,970	421,396	352,120	430,379	592,010
50%	553,244	552,378	627,602	625,984	615,629	625,541	583,090	519,773	414,306	344,628	418,075	565,852
60%	521,700	498,542	621,940	612,864	591,932	614,278	561,427	497,067	398,085	340,068	406,771	459,908
70%	502,455	444,756	576,604	467,945	390,704	482,875	535,251	481,529	385,813	338,018	396,424	400,984
80%	478,736	398,127	423,206	382,314	381,802	382,314	493,004	462,266	369,315	337,331	390,411	366,650
90%	444,456	372,908	365,159	358,492	365,685	356,925	399,441	432,965	355,162	336,967	376,945	337,332
Long Term												
Full Simulation Period[b]	540,292	525,405	568,602	555,999	544,042	555,548	556,088	516,778	412,130	356,767	423,113	505,820
Water Year Types[c]												
Wet (32%)	520,649	490,652	470,095	444,282	459,333	445,524	520,113	481,634	422,784	356,175	413,293	366,266
Above Normal (16%)	541,815	520,202	555,014	522,790	465,999	519,415	550,010	516,937	393,772	340,687	407,234	454,981
Below Normal (13%)	526,726	517,041	625,551	633,364	555,698	618,370	570,884	513,316	396,783	343,763	407,286	584,279
Dry (24%)	548,341	540,291	630,871	624,919	640,956	631,414	602,959	543,467	401,525	360,680	442,048	613,041
Critical (15%)	580,226	589,196	640,771	648,245	639,916	649,048	548,934	551,446	440,680	380,869	444,538	612,644

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-2,542	1,559	0	53	-30	-9	19	-691	1,656	791	-6,266	-3,011
20%	-10,214	41	-33	53	3	-3	-349	22	1,059	373	3,349	-1,764
30%	-2,365	1,663	64	230	-7	-6	0	200	2,215	-2,853	-10,592	-11,516
40%	-2,065	4,181	-1	-185	-1	-734	-86	4,231	-87	-1,374	-3,889	-6,036
50%	-156	1,935	2	-8	8	-50	251	3,024	5,314	-1,979	-1,729	3,484
60%	2,696	-5,922	2,315	-168	-21	-10	225	2,987	347	-995	-3,752	8,660
70%	7,066	-6,925	4,411	-1,635	1,955	-22	1,786	7,453	2,386	16	-3,061	1,095
80%	5,825	444	2,698	0	-1	0	218	11,656	-1,594	1	-3,111	4,623
90%	-4,490	3,100	-92	1,270	4	-320	931	9,537	1,490	-63	-1,665	184
Long Term												
Full Simulation Period[b]	-826	688	378	-401	65	-403	1,759	5,364	1,345	-1,125	-3,579	-1,511
Water Year Types[c]												
Wet (32%)	2,535	-2,600	-380	-862	242	-112	-16	-163	189	-374	-211	290
Above Normal (16%)	-4,902	4,387	-1,037	-293	30	-222	33	3,521	397	-143	1,825	4,116
Below Normal (13%)	715	273	1,021	-1,244	324	-1,009	-1,897	1,417	-679	176	4,782	-5,892
Dry (24%)	1,022	2,640	828	-6	-288	-773	3,642	13,143	-98	-1,214	-11,032	-2,475
Critical (15%)	-8,187	929	2,211	595	73	-61	7,689	9,989	9,134	-4,858	-11,971	-5,883

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-16-4. Sacramento River Keswick to Battle Creek Late-Fall-run Juvenile Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	627,314	641,040	652,512	652,733	653,080	654,822	638,489	584,219	468,041	398,186	484,130	632,785
20%	620,501	627,412	650,227	652,132	651,892	653,142	624,779	559,782	439,150	374,923	454,453	627,463
30%	598,656	624,087	633,954	651,054	650,792	651,205	619,268	542,266	418,605	355,461	442,241	623,230
40%	581,741	618,898	628,284	630,852	632,726	638,835	592,215	519,981	402,312	351,960	422,630	599,655
50%	561,184	593,820	627,200	621,443	617,490	621,027	570,216	504,502	388,150	346,185	408,810	590,877
60%	545,037	579,387	620,586	601,842	574,446	612,216	545,628	484,947	379,372	340,190	396,894	578,960
70%	491,132	561,227	544,145	431,586	382,314	458,197	522,580	466,285	363,895	337,801	388,249	564,451
80%	468,879	516,863	390,190	382,314	373,984	378,237	472,169	438,510	354,203	337,491	372,100	550,661
90%	451,961	480,391	357,486	356,586	355,544	356,789	399,242	408,705	340,207	337,033	357,605	444,323
Long Term												
Full Simulation Period[b]	548,320	574,360	562,186	541,895	539,127	550,228	546,878	499,145	397,563	357,485	416,477	572,650
Water Year Types[c]												
Wet (32%)	535,032	559,211	444,754	432,266	451,323	446,173	515,862	475,686	418,495	358,149	392,771	522,675
Above Normal (16%)	551,560	557,478	571,041	498,137	448,017	499,290	546,681	497,402	378,407	339,460	389,699	564,823
Below Normal (13%)	530,312	559,201	621,306	595,532	549,245	592,090	554,853	480,249	380,126	342,104	383,786	587,659
Dry (24%)	542,744	597,645	631,532	622,456	640,538	636,651	588,089	517,335	383,022	357,543	456,870	610,962
Critical (15%)	599,404	600,561	637,255	643,393	649,778	648,454	538,299	538,867	413,182	389,577	459,496	611,796

No Action Alternative

	Monthly WUA (Feet2)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	623,017	640,157	652,600	652,782	653,060	654,821	638,223	598,502	468,287	396,846	487,670	631,203
20%	608,964	627,361	651,728	652,034	652,022	653,160	625,399	569,781	453,799	372,279	457,103	627,109
30%	592,596	617,768	640,097	650,917	651,309	651,873	620,307	557,249	433,121	357,876	449,228	621,851
40%	569,681	591,980	628,239	634,602	638,736	640,153	606,281	540,739	421,483	353,494	434,268	598,046
50%	553,399	550,443	627,600	625,993	615,621	625,590	582,839	516,749	408,991	346,607	419,803	562,368
60%	519,004	504,464	619,625	613,032	591,952	614,289	561,202	494,080	397,738	341,063	410,523	451,247
70%	495,388	451,681	572,193	469,580	388,749	482,898	533,465	474,076	383,427	338,001	399,485	399,889
80%	472,912	397,683	420,509	382,314	381,803	382,314	492,785	450,610	370,909	337,330	393,522	362,028
90%	448,945	369,808	365,251	357,222	365,681	357,245	398,511	423,428	353,672	337,030	378,610	337,148
Long Term												
Full Simulation Period[b]	541,118	524,717	568,224	556,400	543,976	555,952	554,329	511,414	410,786	357,892	426,691	507,331
Water Year Types[c]												
Wet (32%)	518,114	493,252	470,475	445,144	459,091	445,636	520,129	481,798	422,595	356,550	413,504	365,976
Above Normal (16%)	546,717	515,815	556,051	523,083	465,969	519,637	549,977	513,416	393,375	340,830	405,409	450,866
Below Normal (13%)	526,010	516,768	624,530	634,608	555,374	619,378	572,781	511,898	397,461	343,587	402,505	590,171
Dry (24%)	547,318	537,651	630,043	624,925	641,243	632,188	599,317	530,323	401,623	361,894	453,080	615,516
Critical (15%)	588,413	588,267	638,560	647,649	639,843	649,110	541,246	541,457	431,547	385,727	456,509	618,527

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-4,297	-882	88	49	-20	-1	-266	14,282	246	-1,340	3,540	-1,582
20%	-11,537	-51	1,501	-98	130	19	620	10,000	14,649	-2,644	2,650	-353
30%	-6,059	-6,319	6,144	-137	517	668	1,039	14,983	14,516	2,415	6,986	-1,379
40%	-12,061	-26,918	-45	3,750	6,009	1,318	14,066	20,758	19,171	1,534	11,638	-1,609
50%	-7,784	-43,377	400	4,549	-1,870	4,563	12,623	12,247	20,842	422	10,993	-28,510
60%	-26,033	-74,923	-961	11,190	17,507	2,073	15,574	9,134	18,367	872	13,630	-127,712
70%	4,256	-109,546	28,048	37,995	6,435	24,700	10,885	7,791	19,532	200	11,237	-164,561
80%	4,032	-119,180	30,319	0	7,820	4,077	20,616	12,101	16,706	-161	21,422	-188,633
90%	-3,015	-110,584	7,765	636	10,137	456	-732	14,723	13,465	-3	21,005	-107,175
Long Term												
Full Simulation Period[b]	-7,202	-49,643	6,039	14,505	4,849	5,723	7,450	12,269	13,222	407	10,214	-65,319
Water Year Types[c]												
Wet (32%)	-16,918	-65,959	25,721	12,878	7,768	-538	4,267	6,112	4,100	-1,599	20,733	-156,700
Above Normal (16%)	-4,844	-41,662	-14,990	24,946	17,952	20,347	3,296	16,014	14,968	1,369	15,711	-113,957
Below Normal (13%)	-4,302	-42,433	3,223	39,076	6,129	27,288	17,928	31,649	17,335	1,483	18,719	2,512
Dry (24%)	4,574	-59,994	-1,490	2,469	706	-4,463	11,228	12,988	18,600	4,351	-3,790	4,553
Critical (15%)	-10,991	-12,294	1,305	4,256	-9,935	656	2,947	2,590	18,364	-3,850	-2,988	6,731

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-16-5. Sacramento River Keswick to Battle Creek Late-Fall-run Juvenile Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	627,314	641,040	652,512	652,733	653,080	654,822	638,489	584,219	468,041	398,186	484,130	632,785
20%	620,501	627,412	650,227	652,132	651,892	653,142	624,779	559,782	439,150	374,923	454,453	627,463
30%	598,656	624,087	633,954	651,054	650,792	651,205	619,268	542,266	418,605	355,461	442,241	623,230
40%	581,741	618,898	628,284	630,852	632,726	638,835	592,215	519,981	402,312	351,960	422,630	599,655
50%	561,184	593,820	627,200	621,443	617,490	621,027	570,216	504,502	388,150	346,185	408,810	590,877
60%	545,037	579,387	620,586	601,842	574,446	612,216	545,628	484,947	379,372	340,190	396,894	578,960
70%	491,132	561,227	544,145	431,586	382,314	458,197	522,580	466,285	363,895	337,801	388,249	564,451
80%	468,879	516,863	390,190	382,314	373,984	378,237	472,169	438,510	354,203	337,491	372,100	550,661
90%	451,961	480,391	357,486	356,586	355,544	356,789	399,242	408,705	340,207	337,033	357,605	444,323
Long Term												
Full Simulation Period[b]	548,320	574,360	562,186	541,895	539,127	550,228	546,878	499,145	397,563	357,485	416,477	572,650
Water Year Types[c]												
Wet (32%)	535,032	559,211	444,754	432,266	451,323	446,173	515,862	475,686	418,495	358,149	392,771	522,675
Above Normal (16%)	551,560	557,478	571,041	498,137	448,017	499,290	546,681	497,402	378,407	339,460	389,699	564,823
Below Normal (13%)	530,312	559,201	621,306	595,532	549,245	592,090	554,853	480,249	380,126	342,104	383,786	587,659
Dry (24%)	542,744	597,645	631,532	622,456	640,538	636,651	588,089	517,335	383,022	357,543	456,870	610,962
Critical (15%)	599,404	600,561	637,255	643,393	649,778	648,454	538,299	538,867	413,182	389,577	459,496	611,796

Alternative 3

	Monthly WUA (Feet2)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	625,570	641,309	652,444	652,846	652,996	654,825	638,393	582,323	468,123	397,479	466,050	630,200
20%	614,404	627,467	649,812	652,206	652,137	652,932	624,578	560,781	434,276	373,122	454,455	627,070
30%	597,586	625,943	634,879	651,219	651,204	651,079	619,272	541,909	416,710	360,392	433,033	618,125
40%	581,893	619,639	627,956	633,765	638,809	639,429	602,830	522,451	399,977	352,796	422,905	603,775
50%	562,752	599,992	626,357	624,942	615,572	621,038	576,101	505,210	391,599	343,164	416,813	585,102
60%	531,052	584,525	615,117	613,215	545,336	612,223	554,446	485,675	383,022	339,611	399,564	573,021
70%	498,299	559,956	549,776	432,866	382,314	458,297	524,856	457,541	366,856	338,011	390,515	552,754
80%	467,395	534,288	384,267	382,314	381,812	378,234	475,919	437,895	352,898	337,495	382,017	499,503
90%	448,508	479,273	357,580	356,658	355,534	356,793	399,417	407,546	344,014	337,198	371,616	455,756
Long Term												
Full Simulation Period[b]	544,915	577,306	561,379	544,567	539,928	550,052	549,986	499,146	398,468	357,817	417,529	563,464
Water Year Types[c]												
Wet (32%)	536,885	561,677	446,693	432,550	451,342	446,178	516,714	475,365	415,742	357,023	401,044	514,123
Above Normal (16%)	546,233	554,439	569,510	505,602	455,570	500,390	549,068	494,812	381,580	340,437	398,604	565,605
Below Normal (13%)	533,793	569,799	621,726	596,109	547,839	592,724	558,253	481,818	383,782	342,955	392,182	535,271
Dry (24%)	531,911	596,784	626,880	624,926	645,199	634,917	594,273	518,348	384,515	356,723	445,670	612,401
Critical (15%)	592,757	610,361	636,566	648,305	640,551	648,351	541,680	539,247	416,052	393,812	450,085	612,329

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-1,744	270	-68	113	-84	3	-96	-1,896	82	-707	-18,080	-2,584
20%	-6,097	55	-415	74	244	-210	-201	999	-4,874	-1,801	1	-393
30%	-1,070	1,857	926	165	412	-126	3	-357	-1,894	4,931	-9,208	-5,106
40%	152	741	-328	2,913	6,082	594	10,615	2,470	-2,335	836	275	4,121
50%	1,569	6,173	-843	3,499	-1,919	11	5,885	708	3,450	-3,020	8,003	-5,776
60%	-13,985	5,138	-5,469	11,373	-29,110	8	8,819	728	3,650	-579	2,670	-5,939
70%	7,166	-1,272	5,632	1,280	0	99	2,276	-8,744	2,962	210	2,266	-11,697
80%	-1,484	17,425	-5,923	0	7,828	-3	3,750	-615	-1,305	3	9,918	-51,158
90%	-3,452	-1,118	94	72	-9	4	174	-1,159	3,807	165	14,010	11,433
Long Term												
Full Simulation Period[b]	-3,405	2,946	-807	2,672	801	-177	3,108	1	905	332	1,052	-9,187
Water Year Types[c]												
Wet (32%)	1,853	2,466	1,939	284	19	5	852	-321	-2,753	-1,126	8,273	-8,552
Above Normal (16%)	-5,328	-3,039	-1,531	7,465	7,553	1,101	2,387	-2,590	3,173	977	8,905	782
Below Normal (13%)	3,481	10,597	420	577	-1,405	634	3,400	1,568	3,656	851	8,396	-52,388
Dry (24%)	-10,833	-861	-4,652	2,470	4,662	-1,734	6,184	1,013	1,492	-820	-11,200	1,439
Critical (15%)	-6,648	9,800	-689	4,913	-9,227	-103	3,381	380	2,870	4,235	-9,411	532

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-16-6. Sacramento River Keswick to Battle Creek Late-Fall-run Juvenile Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	627,314	641,040	652,512	652,733	653,080	654,822	638,489	584,219	468,041	398,186	484,130	632,785
20%	620,501	627,412	650,227	652,132	651,892	653,142	624,779	559,782	439,150	374,923	454,453	627,463
30%	598,656	624,087	633,954	651,054	650,792	651,205	619,268	542,266	418,605	355,461	442,241	623,230
40%	581,741	618,898	628,284	630,852	632,726	638,835	592,215	519,981	402,312	351,960	422,630	599,655
50%	561,184	593,820	627,200	621,443	617,490	621,027	570,216	504,502	388,150	346,185	408,810	590,877
60%	545,037	579,387	620,586	601,842	574,446	612,216	545,628	484,947	379,372	340,190	396,894	578,960
70%	491,132	561,227	544,145	431,586	382,314	458,197	522,580	466,285	363,895	337,801	388,249	564,451
80%	468,879	516,863	390,190	382,314	373,984	378,237	472,169	438,510	354,203	337,491	372,100	550,661
90%	451,961	480,391	357,486	356,586	355,544	356,789	399,242	408,705	340,207	337,033	357,605	444,323
Long Term												
Full Simulation Period[b]	548,320	574,360	562,186	541,895	539,127	550,228	546,878	499,145	397,563	357,485	416,477	572,650
Water Year Types[c]												
Wet (32%)	535,032	559,211	444,754	432,266	451,323	446,173	515,862	475,686	418,495	358,149	392,771	522,675
Above Normal (16%)	551,560	557,478	571,041	498,137	448,017	499,290	546,681	497,402	378,407	339,460	389,699	564,823
Below Normal (13%)	530,312	559,201	621,306	595,532	549,245	592,090	554,853	480,249	380,126	342,104	383,786	587,659
Dry (24%)	542,744	597,645	631,532	622,456	640,538	636,651	588,089	517,335	383,022	357,543	456,870	610,962
Critical (15%)	599,404	600,561	637,255	643,393	649,778	648,454	538,299	538,867	413,182	389,577	459,496	611,796

Alternative 5

	Monthly WUA (Feet2)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	620,475	641,717	652,600	652,835	653,029	654,812	638,242	597,811	469,943	397,637	481,403	628,192
20%	598,750	627,402	651,696	652,087	652,025	653,157	625,050	569,803	454,857	372,652	460,452	625,345
30%	590,231	619,431	640,161	651,147	651,301	651,867	620,307	557,448	435,336	355,023	438,636	610,336
40%	567,616	596,161	628,238	634,417	638,734	639,419	606,196	544,970	421,396	352,120	430,379	592,010
50%	553,244	552,378	627,602	625,984	615,629	625,541	583,090	519,773	414,306	344,628	418,075	565,852
60%	521,700	498,542	621,940	612,864	591,932	614,278	561,427	497,067	398,085	340,068	406,771	459,908
70%	502,455	444,756	576,604	467,945	390,704	482,875	535,251	481,529	385,813	338,018	396,424	400,984
80%	478,736	398,127	423,206	382,314	381,802	382,314	493,004	462,266	369,315	337,331	390,411	366,650
90%	444,456	372,908	365,159	358,492	365,685	356,925	399,441	432,965	355,162	336,967	376,945	337,332
Long Term												
Full Simulation Period[b]	540,292	525,405	568,602	555,999	544,042	555,548	556,088	516,778	412,130	356,767	423,113	505,820
Water Year Types[c]												
Wet (32%)	520,649	490,652	470,095	444,282	459,333	445,524	520,113	481,634	422,784	356,175	413,293	366,266
Above Normal (16%)	541,815	520,202	555,014	522,790	465,999	519,415	550,010	516,937	393,772	340,687	407,234	454,981
Below Normal (13%)	526,726	517,041	625,551	633,364	555,698	618,370	570,884	513,316	396,783	343,763	407,286	584,279
Dry (24%)	548,341	540,291	630,871	624,919	640,956	631,414	602,959	543,467	401,525	360,680	442,048	613,041
Critical (15%)	580,226	589,196	640,771	648,245	639,916	649,048	548,934	551,446	440,680	380,869	444,538	612,644

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance[a]												
10%	-6,839	677	87	102	-50	-10	-246	13,591	1,902	-549	-2,727	-4,593
20%	-21,751	-10	1,468	-44	132	15	270	10,021	15,707	-2,271	5,999	-2,118
30%	-8,424	-4,656	6,208	93	509	662	1,039	15,182	16,731	-438	-3,606	-12,894
40%	-14,125	-22,737	-46	3,565	6,008	584	13,981	24,989	19,084	160	7,749	-7,645
50%	-7,940	-41,441	401	4,541	-1,861	4,513	12,874	15,271	26,156	-1,557	9,264	-25,025
60%	-23,336	-80,845	1,354	11,022	17,486	2,063	15,799	12,120	18,713	-122	9,877	-119,052
70%	11,322	-116,471	32,459	36,359	8,390	24,678	12,671	15,244	21,918	217	8,176	-163,466
80%	9,857	-118,736	33,016	0	7,819	4,077	20,835	23,757	15,112	-160	18,312	-184,011
90%	-7,505	-107,483	7,673	1,906	10,141	136	199	24,260	14,955	-66	19,340	-106,991
Long Term												
Full Simulation Period[b]	-8,028	-48,955	6,417	14,104	4,915	5,320	9,209	17,633	14,567	-718	6,635	-66,830
Water Year Types[c]												
Wet (32%)	-14,383	-68,559	25,341	12,016	8,010	-649	4,251	5,948	4,289	-1,974	20,522	-156,410
Above Normal (16%)	-9,745	-37,275	-16,027	24,653	17,982	20,125	3,329	19,535	15,365	1,226	17,536	-109,842
Below Normal (13%)	-3,587	-42,161	4,244	37,832	6,453	26,280	16,031	33,066	16,656	1,659	23,501	-3,380
Dry (24%)	5,597	-57,354	-661	2,463	418	-5,237	14,870	26,132	18,502	3,137	-14,822	2,078
Critical (15%)	-19,178	-11,365	3,516	4,852	-9,862	594	10,635	12,579	27,498	-8,708	-14,959	847

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.17. Sacramento River Keswick to Battle Creek Winter-run Spawning WUA

Table C-17-1. Sacramento River Keswick to Battle Creek Winter-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	1,403,913	1,402,880	1,348,779	1,247,288	1,367,607
20%	1,397,234	1,398,995	1,330,501	1,151,512	1,331,580
30%	1,383,804	1,396,483	1,304,899	1,076,028	1,319,609
40%	1,361,660	1,387,544	1,284,770	1,025,646	1,301,422
50%	1,324,052	1,380,781	1,273,387	958,494	1,285,083
60%	1,302,499	1,356,884	1,257,377	910,240	1,273,275
70%	1,285,673	1,337,467	1,200,325	877,392	1,255,269
80%	1,209,817	1,317,403	1,147,542	871,333	1,236,598
90%	1,110,877	1,269,393	1,034,226	869,188	1,177,234
Long Term					
Full Simulation Period[b]	1,279,022	1,347,771	1,228,845	1,007,482	1,270,063
Water Year Types[c]					
Wet (32%)	1,208,241	1,322,121	1,258,600	1,017,390	1,253,869
Above Normal (16%)	1,321,724	1,358,993	1,202,350	899,621	1,252,481
Below Normal (13%)	1,342,980	1,370,832	1,183,951	932,527	1,195,328
Dry (24%)	1,280,462	1,339,410	1,204,846	1,029,261	1,315,141
Critical (15%)	1,325,090	1,383,981	1,274,231	1,135,274	1,317,574

Alternative 1

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	1,405,324	1,404,630	1,349,285	1,253,699	1,364,744
20%	1,396,981	1,400,993	1,314,712	1,159,614	1,326,667
30%	1,390,559	1,395,902	1,284,018	1,048,761	1,313,107
40%	1,370,422	1,384,675	1,269,628	1,007,144	1,288,359
50%	1,320,969	1,375,661	1,220,534	953,500	1,271,188
60%	1,303,778	1,353,332	1,187,322	903,226	1,249,593
70%	1,289,429	1,326,846	1,111,983	875,530	1,214,612
80%	1,209,970	1,303,044	1,037,608	872,770	1,150,449
90%	1,110,468	1,259,168	900,913	868,689	1,073,928
Long Term					
Full Simulation Period[b]	1,284,304	1,344,150	1,175,993	1,004,101	1,235,735
Water Year Types[c]					
Wet (32%)	1,214,079	1,317,062	1,249,372	1,029,435	1,204,658
Above Normal (16%)	1,323,531	1,352,103	1,124,654	891,173	1,184,894
Below Normal (13%)	1,341,241	1,351,347	1,079,799	913,397	1,120,010
Dry (24%)	1,292,959	1,346,626	1,140,705	1,002,248	1,326,201
Critical (15%)	1,327,342	1,383,498	1,219,615	1,157,785	1,313,449

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	1,411	1,750	506	6,411	-2,863
20%	-253	1,998	-15,789	8,101	-4,913
30%	6,755	-581	-20,881	-27,267	-6,502
40%	8,763	-2,869	-15,143	-18,502	-13,063
50%	-3,083	-5,120	-52,854	-4,994	-13,894
60%	1,278	-3,552	-70,055	-7,014	-23,681
70%	3,756	-10,621	-88,341	-1,863	-40,658
80%	152	-14,359	-109,934	1,437	-86,150
90%	-409	-10,225	-133,312	-500	-103,306
Long Term					
Full Simulation Period[b]	5,282	-3,621	-52,852	-3,381	-34,328
Water Year Types[c]					
Wet (32%)	5,837	-5,059	-9,228	12,045	-49,211
Above Normal (16%)	1,807	-6,890	-77,696	-8,448	-67,587
Below Normal (13%)	-1,739	-19,485	-104,152	-19,130	-75,318
Dry (24%)	12,497	7,216	-64,141	-27,013	11,060
Critical (15%)	2,253	-483	-54,616	22,511	-4,125

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-17-2. Sacramento River Keswick to Battle Creek Winter-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	1,403,913	1,402,880	1,348,779	1,247,288	1,367,607
20%	1,397,234	1,398,995	1,330,501	1,151,512	1,331,580
30%	1,383,804	1,396,483	1,304,899	1,076,028	1,319,609
40%	1,361,660	1,387,544	1,284,770	1,025,646	1,301,422
50%	1,324,052	1,380,781	1,273,387	958,494	1,285,083
60%	1,302,499	1,356,884	1,257,377	910,240	1,273,275
70%	1,285,673	1,337,467	1,200,325	877,392	1,255,269
80%	1,209,817	1,317,403	1,147,542	871,333	1,236,598
90%	1,110,877	1,269,393	1,034,226	869,188	1,177,234
Long Term					
Full Simulation Period[b]	1,279,022	1,347,771	1,228,845	1,007,482	1,270,063
Water Year Types[c]					
Wet (32%)	1,208,241	1,322,121	1,258,600	1,017,390	1,253,869
Above Normal (16%)	1,321,724	1,358,993	1,202,350	899,621	1,252,481
Below Normal (13%)	1,342,980	1,370,832	1,183,951	932,527	1,195,328
Dry (24%)	1,280,462	1,339,410	1,204,846	1,029,261	1,315,141
Critical (15%)	1,325,090	1,383,981	1,274,231	1,135,274	1,317,574

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	1,403,847	1,404,936	1,349,165	1,248,654	1,347,291
20%	1,397,388	1,401,376	1,309,945	1,153,043	1,327,681
30%	1,387,079	1,394,573	1,282,169	1,089,259	1,301,074
40%	1,355,751	1,386,531	1,265,635	1,017,782	1,290,269
50%	1,324,261	1,375,293	1,231,937	928,638	1,281,086
60%	1,307,204	1,351,627	1,196,594	895,467	1,254,206
70%	1,292,343	1,328,229	1,128,461	877,400	1,221,431
80%	1,209,731	1,303,176	1,024,198	872,846	1,193,903
90%	1,110,594	1,251,007	940,203	870,160	1,145,752
Long Term					
Full Simulation Period[b]	1,282,458	1,343,002	1,182,749	1,005,743	1,251,126
Water Year Types[c]					
Wet (32%)	1,212,391	1,316,850	1,241,020	1,021,763	1,222,330
Above Normal (16%)	1,321,765	1,351,764	1,144,651	897,331	1,223,088
Below Normal (13%)	1,340,244	1,352,936	1,101,790	918,585	1,191,118
Dry (24%)	1,289,949	1,341,107	1,145,755	999,319	1,305,669
Critical (15%)	1,326,234	1,384,222	1,233,635	1,179,081	1,307,994

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	-67	2,057	385	1,366	-20,316
20%	154	2,380	-20,556	1,531	-3,898
30%	3,275	-1,910	-22,730	13,231	-18,535
40%	-5,909	-1,013	-19,135	-7,864	-11,153
50%	210	-5,488	-41,450	-29,856	-3,997
60%	4,704	-5,257	-60,784	-14,773	-19,069
70%	6,671	-9,237	-71,863	8	-33,838
80%	-87	-14,227	-123,344	1,512	-42,696
90%	-283	-18,386	-94,023	972	-31,483
Long Term					
Full Simulation Period[b]	3,436	-4,769	-46,096	-1,739	-18,937
Water Year Types[c]					
Wet (32%)	4,149	-5,271	-17,580	4,373	-31,539
Above Normal (16%)	40	-7,229	-57,699	-2,291	-29,393
Below Normal (13%)	-2,735	-17,895	-82,161	-13,943	-4,210
Dry (24%)	9,487	1,697	-59,091	-29,941	-9,472
Critical (15%)	1,144	240	-40,595	43,807	-9,580

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-17-3. Sacramento River Keswick to Battle Creek Winter-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	1,403,913	1,402,880	1,348,779	1,247,288	1,367,607
20%	1,397,234	1,398,995	1,330,501	1,151,512	1,331,580
30%	1,383,804	1,396,483	1,304,899	1,076,028	1,319,609
40%	1,361,660	1,387,544	1,284,770	1,025,646	1,301,422
50%	1,324,052	1,380,781	1,273,387	958,494	1,285,083
60%	1,302,499	1,356,884	1,257,377	910,240	1,273,275
70%	1,285,673	1,337,467	1,200,325	877,392	1,255,269
80%	1,209,817	1,317,403	1,147,542	871,333	1,236,598
90%	1,110,877	1,269,393	1,034,226	869,188	1,177,234
Long Term					
Full Simulation Period[b]	1,279,022	1,347,771	1,228,845	1,007,482	1,270,063
Water Year Types[c]					
Wet (32%)	1,208,241	1,322,121	1,258,600	1,017,390	1,253,869
Above Normal (16%)	1,321,724	1,358,993	1,202,350	899,621	1,252,481
Below Normal (13%)	1,342,980	1,370,832	1,183,951	932,527	1,195,328
Dry (24%)	1,280,462	1,339,410	1,204,846	1,029,261	1,315,141
Critical (15%)	1,325,090	1,383,981	1,274,231	1,135,274	1,317,574

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	1,403,791	1,402,801	1,350,780	1,252,313	1,357,205
20%	1,397,937	1,400,938	1,333,003	1,153,273	1,334,527
30%	1,383,430	1,397,141	1,305,454	1,044,551	1,310,720
40%	1,362,747	1,388,451	1,287,646	1,011,128	1,297,967
50%	1,328,004	1,381,449	1,276,882	940,783	1,281,811
60%	1,308,213	1,366,765	1,257,049	902,840	1,267,554
70%	1,292,294	1,345,468	1,210,126	877,459	1,245,717
80%	1,209,824	1,332,896	1,139,222	871,342	1,223,345
90%	1,110,707	1,292,590	1,050,095	868,102	1,174,413
Long Term					
Full Simulation Period[b]	1,280,939	1,352,263	1,232,517	1,001,043	1,267,903
Water Year Types[c]					
Wet (32%)	1,208,260	1,322,053	1,259,471	1,013,803	1,252,971
Above Normal (16%)	1,321,807	1,359,027	1,204,844	897,679	1,254,190
Below Normal (13%)	1,344,630	1,373,097	1,189,342	932,859	1,212,358
Dry (24%)	1,281,672	1,354,165	1,204,076	1,020,532	1,303,214
Critical (15%)	1,334,529	1,388,120	1,291,075	1,115,393	1,307,177

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	-122	-79	2,000	5,025	-10,402
20%	703	1,943	2,502	1,760	2,947
30%	-374	659	555	-31,477	-8,889
40%	1,087	907	2,876	-14,518	-3,455
50%	3,952	668	3,494	-17,710	-3,272
60%	5,714	9,881	-329	-7,400	-5,720
70%	6,621	8,002	9,801	67	-9,552
80%	7	15,493	-8,320	9	-13,253
90%	-170	23,197	15,870	-1,086	-2,821
Long Term					
Full Simulation Period[b]	1,917	4,492	3,672	-6,439	-2,160
Water Year Types[c]					
Wet (32%)	19	-68	871	-3,587	-899
Above Normal (16%)	82	34	2,494	-1,942	1,709
Below Normal (13%)	1,650	2,265	5,391	331	17,029
Dry (24%)	1,210	14,756	-770	-8,728	-11,927
Critical (15%)	9,439	4,138	16,844	-19,881	-10,397

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-17-4. Sacramento River Keswick to Battle Creek Winter-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	1,405,324	1,404,630	1,349,285	1,253,699	1,364,744
20%	1,396,981	1,400,993	1,314,712	1,159,614	1,326,667
30%	1,390,559	1,395,902	1,284,018	1,048,761	1,313,107
40%	1,370,422	1,384,675	1,269,628	1,007,144	1,288,359
50%	1,320,969	1,375,661	1,220,534	953,500	1,271,188
60%	1,303,778	1,353,332	1,187,322	903,226	1,249,593
70%	1,289,429	1,326,846	1,111,983	875,530	1,214,612
80%	1,209,970	1,303,044	1,037,608	872,770	1,150,449
90%	1,110,468	1,259,168	900,913	868,689	1,073,928
Long Term					
Full Simulation Period[b]	1,284,304	1,344,150	1,175,993	1,004,101	1,235,735
Water Year Types[c]					
Wet (32%)	1,214,079	1,317,062	1,249,372	1,029,435	1,204,658
Above Normal (16%)	1,323,531	1,352,103	1,124,654	891,173	1,184,894
Below Normal (13%)	1,341,241	1,351,347	1,079,799	913,397	1,120,010
Dry (24%)	1,292,959	1,346,626	1,140,705	1,002,248	1,326,201
Critical (15%)	1,327,342	1,383,498	1,219,615	1,157,785	1,313,449

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	1,403,913	1,402,880	1,348,779	1,247,288	1,367,607
20%	1,397,234	1,398,995	1,330,501	1,151,512	1,331,580
30%	1,383,804	1,396,483	1,304,899	1,076,028	1,319,609
40%	1,361,660	1,387,544	1,284,770	1,025,646	1,301,422
50%	1,324,052	1,380,781	1,273,387	958,494	1,285,083
60%	1,302,499	1,356,884	1,257,377	910,240	1,273,275
70%	1,285,673	1,337,467	1,200,325	877,392	1,255,269
80%	1,209,817	1,317,403	1,147,542	871,333	1,236,598
90%	1,110,877	1,269,393	1,034,226	869,188	1,177,234
Long Term					
Full Simulation Period[b]	1,279,022	1,347,771	1,228,845	1,007,482	1,270,063
Water Year Types[c]					
Wet (32%)	1,208,241	1,322,121	1,258,600	1,017,390	1,253,869
Above Normal (16%)	1,321,724	1,358,993	1,202,350	899,621	1,252,481
Below Normal (13%)	1,342,980	1,370,832	1,183,951	932,527	1,195,328
Dry (24%)	1,280,462	1,339,410	1,204,846	1,029,261	1,315,141
Critical (15%)	1,325,090	1,383,981	1,274,231	1,135,274	1,317,574

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	-1,411	-1,750	-506	-6,411	2,863
20%	253	-1,998	15,789	-8,101	4,913
30%	-6,755	581	20,881	27,267	6,502
40%	-8,763	2,869	15,143	18,502	13,063
50%	3,083	5,120	52,854	4,994	13,894
60%	-1,278	3,552	70,055	7,014	23,681
70%	-3,756	10,621	88,341	1,863	40,658
80%	-152	14,359	109,934	-1,437	86,150
90%	409	10,225	133,312	500	103,306
Long Term					
Full Simulation Period[b]	-5,282	3,621	52,852	3,381	34,328
Water Year Types[c]					
Wet (32%)	-5,837	5,059	9,228	-12,045	49,211
Above Normal (16%)	-1,807	6,890	77,696	8,448	67,587
Below Normal (13%)	1,739	19,485	104,152	19,130	75,318
Dry (24%)	-12,497	-7,216	64,141	27,013	-11,060
Critical (15%)	-2,253	483	54,616	-22,511	4,125

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-17-5. Sacramento River Keswick to Battle Creek Winter-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	1,405,324	1,404,630	1,349,285	1,253,699	1,364,744
20%	1,396,981	1,400,993	1,314,712	1,159,614	1,326,667
30%	1,390,559	1,395,902	1,284,018	1,048,761	1,313,107
40%	1,370,422	1,384,675	1,269,628	1,007,144	1,288,359
50%	1,320,969	1,375,661	1,220,534	953,500	1,271,188
60%	1,303,778	1,353,332	1,187,322	903,226	1,249,593
70%	1,289,429	1,326,846	1,111,983	875,530	1,214,612
80%	1,209,970	1,303,044	1,037,608	872,770	1,150,449
90%	1,110,468	1,259,168	900,913	868,689	1,073,928
Long Term					
Full Simulation Period[b]	1,284,304	1,344,150	1,175,993	1,004,101	1,235,735
Water Year Types[c]					
Wet (32%)	1,214,079	1,317,062	1,249,372	1,029,435	1,204,658
Above Normal (16%)	1,323,531	1,352,103	1,124,654	891,173	1,184,894
Below Normal (13%)	1,341,241	1,351,347	1,079,799	913,397	1,120,010
Dry (24%)	1,292,959	1,346,626	1,140,705	1,002,248	1,326,201
Critical (15%)	1,327,342	1,383,498	1,219,615	1,157,785	1,313,449

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	1,403,847	1,404,936	1,349,165	1,248,654	1,347,291
20%	1,397,388	1,401,376	1,309,945	1,153,043	1,327,681
30%	1,387,079	1,394,573	1,282,169	1,089,259	1,301,074
40%	1,355,751	1,386,531	1,265,635	1,017,782	1,290,269
50%	1,324,261	1,375,293	1,231,937	928,638	1,281,086
60%	1,307,204	1,351,627	1,196,594	895,467	1,254,206
70%	1,292,343	1,328,229	1,128,461	877,400	1,221,431
80%	1,209,731	1,303,176	1,024,198	872,846	1,193,903
90%	1,110,594	1,251,007	940,203	870,160	1,145,752
Long Term					
Full Simulation Period[b]	1,282,458	1,343,002	1,182,749	1,005,743	1,251,126
Water Year Types[c]					
Wet (32%)	1,212,391	1,316,850	1,241,020	1,021,763	1,222,330
Above Normal (16%)	1,321,765	1,351,764	1,144,651	897,331	1,223,088
Below Normal (13%)	1,340,244	1,352,936	1,101,790	918,585	1,191,118
Dry (24%)	1,289,949	1,341,107	1,145,755	999,319	1,305,669
Critical (15%)	1,326,234	1,384,222	1,233,635	1,179,081	1,307,994

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	**-1,478**	306	**-120**	**-5,044**	**-17,453**
20%	407	382	**-4,767**	**-6,571**	1,014
30%	**-3,480**	**-1,329**	**-1,849**	40,498	**-12,033**
40%	**-14,672**	1,856	**-3,992**	10,637	1,910
50%	3,292	**-368**	11,404	**-24,862**	9,898
60%	3,426	**-1,705**	9,272	**-7,759**	4,613
70%	2,915	1,383	16,478	1,870	6,820
80%	**-239**	132	**-13,410**	76	43,454
90%	126	**-8,162**	39,290	1,472	71,824
Long Term					
Full Simulation Period[b]	**-1,845**	**-1,148**	6,755	1,642	15,391
Water Year Types[c]					
Wet (32%)	**-1,688**	**-212**	**-8,352**	**-7,672**	17,672
Above Normal (16%)	**-1,767**	**-338**	19,997	6,158	38,194
Below Normal (13%)	**-996**	1,589	21,991	5,188	71,108
Dry (24%)	**-3,010**	**-5,519**	5,050	**-2,928**	**-20,532**
Critical (15%)	**-1,108**	724	14,021	21,296	**-5,456**

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-17-6. Sacramento River Keswick to Battle Creek Winter-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	1,405,324	1,404,630	1,349,285	1,253,699	1,364,744
20%	1,396,981	1,400,993	1,314,712	1,159,614	1,326,667
30%	1,390,559	1,395,902	1,284,018	1,048,761	1,313,107
40%	1,370,422	1,384,675	1,269,628	1,007,144	1,288,359
50%	1,320,969	1,375,661	1,220,534	953,500	1,271,188
60%	1,303,778	1,353,332	1,187,322	903,226	1,249,593
70%	1,289,429	1,326,846	1,111,983	875,530	1,214,612
80%	1,209,970	1,303,044	1,037,608	872,770	1,150,449
90%	1,110,468	1,259,168	900,913	868,689	1,073,928
Long Term					
Full Simulation Period[b]	1,284,304	1,344,150	1,175,993	1,004,101	1,235,735
Water Year Types[c]					
Wet (32%)	1,214,079	1,317,062	1,249,372	1,029,435	1,204,658
Above Normal (16%)	1,323,531	1,352,103	1,124,654	891,173	1,184,894
Below Normal (13%)	1,341,241	1,351,347	1,079,799	913,397	1,120,010
Dry (24%)	1,292,959	1,346,626	1,140,705	1,002,248	1,326,201
Critical (15%)	1,327,342	1,383,498	1,219,615	1,157,785	1,313,449

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	1,403,791	1,402,801	1,350,780	1,252,313	1,357,205
20%	1,397,937	1,400,938	1,333,003	1,153,273	1,334,527
30%	1,383,430	1,397,141	1,305,454	1,044,551	1,310,720
40%	1,362,747	1,388,451	1,287,646	1,011,128	1,297,967
50%	1,328,004	1,381,449	1,276,882	940,783	1,281,811
60%	1,308,213	1,366,765	1,257,049	902,840	1,267,554
70%	1,292,294	1,345,468	1,210,126	877,459	1,245,717
80%	1,209,824	1,332,896	1,139,222	871,342	1,223,345
90%	1,110,707	1,292,590	1,050,095	868,102	1,174,413
Long Term					
Full Simulation Period[b]	1,280,939	1,352,263	1,232,517	1,001,043	1,267,903
Water Year Types[c]					
Wet (32%)	1,208,260	1,322,053	1,259,471	1,013,803	1,252,971
Above Normal (16%)	1,321,807	1,359,027	1,204,844	897,679	1,254,190
Below Normal (13%)	1,344,630	1,373,097	1,189,342	932,859	1,212,358
Dry (24%)	1,281,672	1,354,165	1,204,076	1,020,532	1,303,214
Critical (15%)	1,334,529	1,388,120	1,291,075	1,115,393	1,307,177

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Apr	May	Jun	Jul	Aug
Probability of Exceedance[a]					
10%	**-1,533**	**-1,829**	1,495	**-1,386**	**-7,539**
20%	956	**-55**	18,291	**-6,341**	7,860
30%	**-7,129**	1,239	21,437	**-4,210**	**-2,386**
40%	**-7,676**	3,776	18,019	3,984	9,608
50%	7,034	5,788	56,348	**-12,716**	10,622
60%	4,435	13,433	69,727	**-386**	17,961
70%	2,865	18,622	98,143	1,929	31,106
80%	**-146**	29,851	101,615	**-1,428**	72,896
90%	239	33,422	149,182	**-586**	100,485
Long Term					
Full Simulation Period[b]	**-3,365**	8,113	56,524	**-3,059**	32,168
Water Year Types[c]					
Wet (32%)	**-5,818**	4,991	10,099	**-15,633**	48,313
Above Normal (16%)	**-1,725**	6,924	80,189	6,506	69,296
Below Normal (13%)	3,389	21,750	109,543	19,462	92,348
Dry (24%)	**-11,287**	7,539	63,372	18,285	**-22,987**
Critical (15%)	7,187	4,622	71,460	**-42,393**	**-6,273**

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.18. Sacramento River Keswick to Battle Creek Winter-run Fry Rearing WUA

Table C-18-1. Sacramento River Keswick to Battle Creek Winter-run Fry Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Jun	Jul	Aug	Sep	Oct
Probability of Exceedance[a]					
10%	777,036	901,193	717,563	899,837	795,997
20%	718,973	898,195	692,261	798,837	787,634
30%	693,440	891,503	677,361	797,442	774,643
40%	676,866	861,731	669,826	793,205	751,689
50%	669,540	822,528	662,686	784,323	723,566
60%	663,027	780,278	658,055	764,027	718,470
70%	657,088	757,268	654,511	737,209	697,825
80%	649,166	716,756	649,701	714,498	675,164
90%	645,961	672,058	645,272	664,827	659,406
Long Term					
Full Simulation Period[b]	693,557	808,507	677,515	773,481	730,930
Water Year Types[c]					
Wet (32%)	681,264	798,706	671,961	814,689	716,090
Above Normal (16%)	695,288	877,818	667,580	672,509	737,636
Below Normal (13%)	714,092	853,837	706,305	770,540	720,160
Dry (24%)	700,321	793,075	673,307	779,975	730,735
Critical (15%)	688,221	738,826	680,932	785,458	766,013

Alternative 1

	Monthly WUA (Feet2)				
Statistic	Jun	Jul	Aug	Sep	Oct
Probability of Exceedance[a]					
10%	876,406	901,160	773,332	797,548	796,157
20%	776,331	896,584	725,284	795,630	795,690
30%	738,290	893,490	699,551	789,641	775,842
40%	697,773	869,905	681,701	776,581	765,083
50%	691,922	825,433	672,996	773,012	733,306
60%	675,636	788,743	662,654	752,858	720,847
70%	668,666	770,034	656,655	741,165	691,102
80%	655,558	709,353	652,439	731,472	673,098
90%	648,377	666,917	647,931	683,460	659,990
Long Term					
Full Simulation Period[b]	721,892	809,850	693,890	757,176	734,070
Water Year Types[c]					
Wet (32%)	684,230	790,092	690,232	736,710	727,056
Above Normal (16%)	742,799	882,394	699,981	745,101	736,594
Below Normal (13%)	781,782	866,782	748,090	765,601	721,622
Dry (24%)	731,750	807,978	667,680	777,057	726,140
Critical (15%)	709,514	725,002	689,215	773,742	771,159

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Jun	Jul	Aug	Sep	Oct
Probability of Exceedance[a]					
10%	99,370	-33	55,769	-102,290	160
20%	57,358	-1,611	33,022	-3,207	8,056
30%	44,850	1,987	22,189	-7,801	1,199
40%	20,907	8,174	11,875	-16,623	13,394
50%	22,382	2,905	10,310	-11,310	9,740
60%	12,609	8,465	4,599	-11,169	2,377
70%	11,578	12,766	2,144	3,956	-6,723
80%	6,391	-7,403	2,738	16,974	-2,066
90%	2,416	-5,140	2,658	18,633	584
Long Term					
Full Simulation Period[b]	28,334	1,343	16,375	-16,305	3,140
Water Year Types[c]					
Wet (32%)	2,966	-8,614	18,271	-77,979	10,966
Above Normal (16%)	47,511	4,576	32,401	72,592	-1,042
Below Normal (13%)	67,690	12,945	41,785	-4,939	1,462
Dry (24%)	31,428	14,903	-5,626	-2,918	-4,595
Critical (15%)	21,292	-13,824	8,282	-11,716	5,146

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-18-2. Sacramento River Keswick to Battle Creek Winter-run Fry Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Jun	Jul	Aug	Sep	Oct
Probability of Exceedance[a]					
10%	777,036	901,193	717,563	899,837	795,997
20%	718,973	898,195	692,261	798,837	787,634
30%	693,440	891,503	677,361	797,442	774,643
40%	676,866	861,731	669,826	793,205	751,689
50%	669,540	822,528	662,686	784,323	723,566
60%	663,027	780,278	658,055	764,027	718,470
70%	657,088	757,268	654,511	737,209	697,825
80%	649,166	716,756	649,701	714,498	675,164
90%	645,961	672,058	645,272	664,827	659,406
Long Term					
Full Simulation Period[b]	693,557	808,507	677,515	773,481	730,930
Water Year Types[c]					
Wet (32%)	681,264	798,706	671,961	814,689	716,090
Above Normal (16%)	695,288	877,818	667,580	672,509	737,636
Below Normal (13%)	714,092	853,837	706,305	770,540	720,160
Dry (24%)	700,321	793,075	673,307	779,975	730,735
Critical (15%)	688,221	738,826	680,932	785,458	766,013

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Jun	Jul	Aug	Sep	Oct
Probability of Exceedance[a]					
10%	836,741	899,510	727,605	797,468	796,324
20%	781,724	896,550	703,158	796,434	794,109
30%	729,833	891,393	686,225	791,912	779,591
40%	695,713	875,296	678,223	781,233	765,717
50%	686,914	846,791	667,843	765,786	736,791
60%	675,468	784,215	659,052	742,936	719,822
70%	669,424	748,909	654,472	734,900	702,328
80%	659,182	714,469	649,448	718,903	670,559
90%	649,327	668,704	644,087	681,410	659,313
Long Term					
Full Simulation Period[b]	717,540	810,069	681,516	753,158	734,416
Water Year Types[c]					
Wet (32%)	688,352	796,318	681,089	728,495	729,723
Above Normal (16%)	725,393	879,251	680,452	746,488	733,224
Below Normal (13%)	768,531	863,925	703,989	741,636	724,975
Dry (24%)	731,434	811,551	670,579	782,547	723,409
Critical (15%)	702,373	713,077	681,222	775,404	772,877

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Jun	Jul	Aug	Sep	Oct
Probability of Exceedance[a]					
10%	59,705	**-1,683**	10,042	**-102,369**	327
20%	62,751	**-1,645**	10,896	**-2,403**	6,475
30%	36,392	**-110**	8,863	**-5,530**	4,947
40%	18,847	13,564	8,398	**-11,971**	14,028
50%	17,375	24,264	5,157	**-18,537**	13,225
60%	12,441	3,938	997	**-21,091**	1,353
70%	12,336	**-8,360**	**-38**	**-2,309**	4,503
80%	10,016	**-2,287**	**-253**	4,406	**-4,605**
90%	3,367	**-3,354**	**-1,185**	16,583	**-93**
Long Term					
Full Simulation Period[b]	23,983	1,562	4,001	**-20,323**	3,487
Water Year Types[c]					
Wet (32%)	7,089	**-2,388**	9,128	**-86,194**	13,633
Above Normal (16%)	30,105	1,433	12,872	73,979	**-4,413**
Below Normal (13%)	54,439	10,088	**-2,316**	**-28,904**	4,815
Dry (24%)	31,112	18,476	**-2,727**	2,572	**-7,326**
Critical (15%)	14,152	**-25,749**	290	**-10,054**	6,863

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-18-3. Sacramento River Keswick to Battle Creek Winter-run Fry Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Jun	Jul	Aug	Sep	Oct
Probability of Exceedance[a]					
10%	777,036	901,193	717,563	899,837	795,997
20%	718,973	898,195	692,261	798,837	787,634
30%	693,440	891,503	677,361	797,442	774,643
40%	676,866	861,731	669,826	793,205	751,689
50%	669,540	822,528	662,686	784,323	723,566
60%	663,027	780,278	658,055	764,027	718,470
70%	657,088	757,268	654,511	737,209	697,825
80%	649,166	716,756	649,701	714,498	675,164
90%	645,961	672,058	645,272	664,827	659,406
Long Term					
Full Simulation Period[b]	693,557	808,507	677,515	773,481	730,930
Water Year Types[c]					
Wet (32%)	681,264	798,706	671,961	814,689	716,090
Above Normal (16%)	695,288	877,818	667,580	672,509	737,636
Below Normal (13%)	714,092	853,837	706,305	770,540	720,160
Dry (24%)	700,321	793,075	673,307	779,975	730,735
Critical (15%)	688,221	738,826	680,932	785,458	766,013

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Jun	Jul	Aug	Sep	Oct
Probability of Exceedance[a]					
10%	770,134	901,817	711,676	898,008	794,117
20%	724,855	898,185	695,895	798,763	780,450
30%	690,734	891,327	678,859	796,831	772,523
40%	676,812	870,404	673,090	792,899	750,487
50%	669,716	836,404	666,341	784,390	723,241
60%	663,144	788,345	658,547	765,741	717,918
70%	656,993	771,884	654,679	735,475	706,659
80%	649,854	716,101	649,439	717,944	678,833
90%	646,076	666,579	643,874	663,729	659,127
Long Term					
Full Simulation Period[b]	692,635	812,012	676,616	772,849	730,814
Water Year Types[c]					
Wet (32%)	680,868	800,227	672,396	811,606	716,996
Above Normal (16%)	693,934	879,555	669,258	677,001	736,147
Below Normal (13%)	711,870	853,587	698,826	768,514	721,756
Dry (24%)	700,592	799,785	671,768	782,232	732,190
Critical (15%)	685,828	746,640	681,449	781,048	760,986

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Jun	Jul	Aug	Sep	Oct
Probability of Exceedance[a]					
10%	**-6,901**	625	**-5,887**	**-1,829**	**-1,880**
20%	5,882	**-10**	3,633	**-74**	**-7,185**
30%	**-2,706**	**-176**	1,497	**-611**	**-2,120**
40%	**-54**	8,673	3,264	**-306**	**-1,202**
50%	176	13,876	3,656	67	**-325**
60%	117	8,068	492	1,714	**-551**
70%	**-95**	14,616	169	**-1,735**	8,834
80%	688	**-655**	**-262**	3,447	3,670
90%	116	**-5,479**	**-1,399**	**-1,098**	**-279**
Long Term					
Full Simulation Period[b]	**-922**	3,504	**-899**	**-632**	**-116**
Water Year Types[c]					
Wet (32%)	**-395**	1,521	435	**-3,082**	906
Above Normal (16%)	**-1,354**	1,737	1,678	4,493	**-1,490**
Below Normal (13%)	**-2,221**	**-250**	**-7,479**	**-2,026**	1,596
Dry (24%)	271	6,710	**-1,539**	2,257	1,455
Critical (15%)	**-2,393**	7,814	517	**-4,410**	**-5,028**

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-18-4. Sacramento River Keswick to Battle Creek Winter-run Fry Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Jun	Jul	Aug	Sep	Oct
Probability of Exceedance[a]					
10%	876,406	901,160	773,332	797,548	796,157
20%	776,331	896,584	725,284	795,630	795,690
30%	738,290	893,490	699,551	789,641	775,842
40%	697,773	869,905	681,701	776,581	765,083
50%	691,922	825,433	672,996	773,012	733,306
60%	675,636	788,743	662,654	752,858	720,847
70%	668,666	770,034	656,655	741,165	691,102
80%	655,558	709,353	652,439	731,472	673,098
90%	648,377	666,917	647,931	683,460	659,990
Long Term					
Full Simulation Period[b]	721,892	809,850	693,890	757,176	734,070
Water Year Types[c]					
Wet (32%)	684,230	790,092	690,232	736,710	727,056
Above Normal (16%)	742,799	882,394	699,981	745,101	736,594
Below Normal (13%)	781,782	866,782	748,090	765,601	721,622
Dry (24%)	731,750	807,978	667,680	777,057	726,140
Critical (15%)	709,514	725,002	689,215	773,742	771,159

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Jun	Jul	Aug	Sep	Oct
Probability of Exceedance[a]					
10%	777,036	901,193	717,563	899,837	795,997
20%	718,973	898,195	692,261	798,837	787,634
30%	693,440	891,503	677,361	797,442	774,643
40%	676,866	861,731	669,826	793,205	751,689
50%	669,540	822,528	662,686	784,323	723,566
60%	663,027	780,278	658,055	764,027	718,470
70%	657,088	757,268	654,511	737,209	697,825
80%	649,166	716,756	649,701	714,498	675,164
90%	645,961	672,058	645,272	664,827	659,406
Long Term					
Full Simulation Period[b]	693,557	808,507	677,515	773,481	730,930
Water Year Types[c]					
Wet (32%)	681,264	798,706	671,961	814,689	716,090
Above Normal (16%)	695,288	877,818	667,580	672,509	737,636
Below Normal (13%)	714,092	853,837	706,305	770,540	720,160
Dry (24%)	700,321	793,075	673,307	779,975	730,735
Critical (15%)	688,221	738,826	680,932	785,458	766,013

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Jun	Jul	Aug	Sep	Oct
Probability of Exceedance[a]					
10%	-99,370	33	-55,769	102,290	-160
20%	-57,358	1,611	-33,022	3,207	-8,056
30%	-44,850	-1,987	-22,189	7,801	-1,199
40%	-20,907	-8,174	-11,875	16,623	-13,394
50%	-22,382	-2,905	-10,310	11,310	-9,740
60%	-12,609	-8,465	-4,599	11,169	-2,377
70%	-11,578	-12,766	-2,144	-3,956	6,723
80%	-6,391	7,403	-2,738	-16,974	2,066
90%	-2,416	5,140	-2,658	-18,633	-584
Long Term					
Full Simulation Period[b]	-28,334	-1,343	-16,375	16,305	-3,140
Water Year Types[c]					
Wet (32%)	-2,966	8,614	-18,271	77,979	-10,966
Above Normal (16%)	-47,511	-4,576	-32,401	-72,592	1,042
Below Normal (13%)	-67,690	-12,945	-41,785	4,939	-1,462
Dry (24%)	-31,428	-14,903	5,626	2,918	4,595
Critical (15%)	-21,292	13,824	-8,282	11,716	-5,146

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-18-5. Sacramento River Keswick to Battle Creek Winter-run Fry Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Jun	Jul	Aug	Sep	Oct
Probability of Exceedance[a]					
10%	876,406	901,160	773,332	797,548	796,157
20%	776,331	896,584	725,284	795,630	795,690
30%	738,290	893,490	699,551	789,641	775,842
40%	697,773	869,905	681,701	776,581	765,083
50%	691,922	825,433	672,996	773,012	733,306
60%	675,636	788,743	662,654	752,858	720,847
70%	668,666	770,034	656,655	741,165	691,102
80%	655,558	709,353	652,439	731,472	673,098
90%	648,377	666,917	647,931	683,460	659,990
Long Term					
Full Simulation Period[b]	721,892	809,850	693,890	757,176	734,070
Water Year Types[c]					
Wet (32%)	684,230	790,092	690,232	736,710	727,056
Above Normal (16%)	742,799	882,394	699,981	745,101	736,594
Below Normal (13%)	781,782	866,782	748,090	765,601	721,622
Dry (24%)	731,750	807,978	667,680	777,057	726,140
Critical (15%)	709,514	725,002	689,215	773,742	771,159

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Jun	Jul	Aug	Sep	Oct
Probability of Exceedance[a]					
10%	836,741	899,510	727,605	797,468	796,324
20%	781,724	896,550	703,158	796,434	794,109
30%	729,833	891,393	686,225	791,912	779,591
40%	695,713	875,296	678,223	781,233	765,717
50%	686,914	846,791	667,843	765,786	736,791
60%	675,468	784,215	659,052	742,936	719,822
70%	669,424	748,909	654,472	734,900	702,328
80%	659,182	714,469	649,448	718,903	670,559
90%	649,327	668,704	644,087	681,410	659,313
Long Term					
Full Simulation Period[b]	717,540	810,069	681,516	753,158	734,416
Water Year Types[c]					
Wet (32%)	688,352	796,318	681,089	728,495	729,723
Above Normal (16%)	725,393	879,251	680,452	746,488	733,224
Below Normal (13%)	768,531	863,925	703,989	741,636	724,975
Dry (24%)	731,434	811,551	670,579	782,547	723,409
Critical (15%)	702,373	713,077	681,222	775,404	772,877

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Jun	Jul	Aug	Sep	Oct
Probability of Exceedance[a]					
10%	**-39,665**	**-1,650**	**-45,728**	**-79**	167
20%	5,393	**-34**	**-22,126**	804	**-1,581**
30%	**-8,458**	**-2,097**	**-13,326**	2,272	3,749
40%	**-2,060**	5,390	**-3,477**	4,652	634
50%	**-5,007**	21,359	**-5,153**	**-7,226**	3,485
60%	**-168**	**-4,528**	**-3,602**	**-9,922**	**-1,024**
70%	758	**-21,125**	**-2,182**	**-6,265**	11,226
80%	3,624	5,116	**-2,991**	**-12,568**	**-2,539**
90%	950	1,787	**-3,843**	**-2,050**	**-677**
Long Term					
Full Simulation Period[b]	**-4,352**	219	**-12,374**	**-4,018**	346
Water Year Types[c]					
Wet (32%)	4,123	6,226	**-9,143**	**-8,215**	2,667
Above Normal (16%)	**-17,406**	**-3,143**	**-19,529**	1,387	**-3,371**
Below Normal (13%)	**-13,251**	**-2,857**	**-44,100**	**-23,965**	3,352
Dry (24%)	**-316**	3,573	2,899	5,490	**-2,731**
Critical (15%)	**-7,141**	**-11,925**	**-7,992**	1,662	1,718

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-18-6. Sacramento River Keswick to Battle Creek Winter-run Fry Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Jun	Jul	Aug	Sep	Oct
Probability of Exceedance[a]					
10%	876,406	901,160	773,332	797,548	796,157
20%	776,331	896,584	725,284	795,630	795,690
30%	738,290	893,490	699,551	789,641	775,842
40%	697,773	869,905	681,701	776,581	765,083
50%	691,922	825,433	672,996	773,012	733,306
60%	675,636	788,743	662,654	752,858	720,847
70%	668,666	770,034	656,655	741,165	691,102
80%	655,558	709,353	652,439	731,472	673,098
90%	648,377	666,917	647,931	683,460	659,990
Long Term					
Full Simulation Period[b]	721,892	809,850	693,890	757,176	734,070
Water Year Types[c]					
Wet (32%)	684,230	790,092	690,232	736,710	727,056
Above Normal (16%)	742,799	882,394	699,981	745,101	736,594
Below Normal (13%)	781,782	866,782	748,090	765,601	721,622
Dry (24%)	731,750	807,978	667,680	777,057	726,140
Critical (15%)	709,514	725,002	689,215	773,742	771,159

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Jun	Jul	Aug	Sep	Oct
Probability of Exceedance[a]					
10%	770,134	901,817	711,676	898,008	794,117
20%	724,855	898,185	695,895	798,763	780,450
30%	690,734	891,327	678,859	796,831	772,523
40%	676,812	870,404	673,090	792,899	750,487
50%	669,716	836,404	666,341	784,390	723,241
60%	663,144	788,345	658,547	765,741	717,918
70%	656,993	771,884	654,679	735,475	706,659
80%	649,854	716,101	649,439	717,944	678,833
90%	646,076	666,579	643,874	663,729	659,127
Long Term					
Full Simulation Period[b]	692,635	812,012	676,616	772,849	730,814
Water Year Types[c]					
Wet (32%)	680,868	800,227	672,396	811,606	716,996
Above Normal (16%)	693,934	879,555	669,258	677,001	736,147
Below Normal (13%)	711,870	853,587	698,826	768,514	721,756
Dry (24%)	700,592	799,785	671,768	782,232	732,190
Critical (15%)	685,828	746,640	681,449	781,048	760,986

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Jun	Jul	Aug	Sep	Oct
Probability of Exceedance[a]					
10%	-106,271	657	-61,656	100,461	-2,040
20%	-51,476	1,601	-29,389	3,133	-15,240
30%	-47,556	-2,163	-20,692	7,191	-3,319
40%	-20,961	499	-8,611	16,317	-14,596
50%	-22,206	10,971	-6,655	11,378	-10,065
60%	-12,492	-398	-4,107	12,883	-2,928
70%	-11,673	1,850	-1,975	-5,691	15,557
80%	-5,704	6,748	-3,000	-13,527	5,735
90%	-2,301	-339	-4,057	-19,731	-863
Long Term					
Full Simulation Period[b]	-29,257	2,162	-17,274	15,673	-3,256
Water Year Types[c]					
Wet (32%)	-3,361	10,135	-17,836	74,897	-10,060
Above Normal (16%)	-48,865	-2,839	-30,723	-68,100	-448
Below Normal (13%)	-69,911	-13,195	-49,263	2,913	133
Dry (24%)	-31,157	-8,193	4,088	5,174	6,050
Critical (15%)	-23,686	21,638	-7,765	7,306	-10,174

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification

(SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.19. Sacramento River Keswick to Battle Creek Winter-run Juvenile Rearing WUA

Table C-19-1. Sacramento River Keswick to Battle Creek Winter-run Juvenile Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)										
Statistic	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Probability of Exceedance[a]											
10%	281,409	310,548	333,866	332,325	333,147	334,345	343,635	406,001	337,232	333,331	327,278
20%	275,553	304,116	333,613	329,892	332,381	333,897	334,074	345,721	334,537	332,947	320,140
30%	273,347	301,490	333,204	324,327	331,691	333,630	333,823	334,173	334,164	331,465	318,857
40%	271,058	296,100	325,708	319,153	325,671	333,011	333,510	333,834	333,782	327,257	317,814
50%	270,255	290,552	318,898	317,858	317,290	332,534	332,839	333,548	333,053	321,915	314,448
60%	269,605	286,716	302,253	314,069	311,767	332,361	332,294	333,096	332,276	319,453	310,951
70%	269,298	282,110	282,624	310,607	301,862	332,133	330,936	332,329	330,796	317,580	308,312
80%	268,669	280,522	275,260	307,905	283,840	319,063	330,384	330,323	316,822	312,690	302,041
90%	267,972	276,033	270,850	299,056	276,503	294,114	295,991	313,048	277,019	290,194	292,622
Long Term											
Full Simulation Period[b]	273,329	292,177	307,770	316,470	312,474	328,615	331,119	339,565	327,071	320,338	311,336
Water Year Types[c]											
Wet (32%)	272,361	288,310	276,743	312,401	309,295	323,698	336,149	351,851	326,362	319,734	305,516
Above Normal (16%)	269,796	285,110	298,518	317,662	308,331	328,318	319,568	348,458	315,498	317,233	311,676
Below Normal (13%)	270,444	286,371	326,567	314,953	310,253	331,533	332,329	321,114	328,121	323,284	312,272
Dry (24%)	273,990	300,321	330,631	316,127	314,960	331,492	329,935	332,518	331,233	325,539	314,892
Critical (15%)	280,799	299,959	329,688	325,958	321,745	332,123	333,597	331,969	333,247	313,644	316,790

Alternative 1

	Monthly WUA (Feet2)										
Statistic	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Probability of Exceedance[a]											
10%	281,861	310,030	333,916	332,462	333,251	343,398	343,713	407,678	337,747	333,424	322,687
20%	275,528	303,298	333,677	332,262	332,422	333,942	334,139	345,715	334,450	332,945	319,420
30%	271,975	298,945	333,445	326,577	332,262	333,598	333,805	334,195	334,169	331,224	318,162
40%	270,836	291,693	327,495	321,166	332,033	332,602	333,617	333,764	333,829	324,649	315,156
50%	269,910	286,071	324,919	318,776	324,963	332,433	332,740	333,331	333,016	320,063	312,731
60%	269,393	281,520	321,632	316,937	320,479	332,284	332,316	333,015	332,315	318,349	309,902
70%	269,168	278,857	320,301	310,233	317,892	332,146	330,865	332,257	330,122	316,027	307,003
80%	268,792	275,515	319,024	307,164	313,820	319,033	311,693	329,961	316,821	311,002	297,967
90%	268,269	273,309	299,287	300,948	309,156	307,873	286,720	306,586	275,987	288,344	286,561
Long Term											
Full Simulation Period[b]	273,191	289,077	321,770	317,799	323,011	330,202	329,440	339,047	326,400	318,751	308,886
Water Year Types[c]											
Wet (32%)	272,674	281,693	311,734	316,396	323,673	326,669	336,654	350,402	327,521	317,836	304,182
Above Normal (16%)	269,483	280,972	320,951	319,012	318,055	332,067	316,180	346,866	312,237	316,414	309,380
Below Normal (13%)	269,903	280,714	324,984	315,941	320,277	331,020	324,511	320,633	322,170	320,081	306,012
Dry (24%)	272,778	301,767	330,140	314,509	325,926	332,000	329,325	332,534	331,944	323,790	311,766
Critical (15%)	282,030	300,373	327,505	326,712	324,592	332,086	332,887	333,706	333,948	313,645	316,378

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)										
Statistic	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Probability of Exceedance[a]											
10%	452	-518	50	137	104	9,054	78	1,677	515	92	-4,591
20%	-25	-818	65	2,370	41	45	65	-6	-87	-1	-720
30%	-1,373	-2,545	241	2,250	571	-32	-18	22	5	-241	-695
40%	-222	-4,407	1,787	2,013	6,362	-410	107	-71	47	-2,608	-2,657
50%	-346	-4,480	6,020	919	7,673	-101	-99	-217	-37	-1,852	-1,717
60%	-212	-5,196	19,379	2,868	8,712	-78	22	-81	38	-1,104	-1,049
70%	-129	-3,253	37,677	-374	16,030	13	-71	-72	-674	-1,552	-1,309
80%	123	-5,007	43,763	-741	29,980	-30	-18,691	-362	-1	-1,688	-4,074
90%	298	-2,723	28,437	1,892	32,652	13,759	-9,272	-6,462	-1,032	-1,850	-6,061
Long Term											
Full Simulation Period[b]	-138	-3,099	14,000	1,329	10,537	1,586	-1,679	-518	-672	-1,588	-2,450
Water Year Types[c]											
Wet (32%)	313	-6,616	34,991	3,995	14,379	2,971	504	-1,449	1,159	-1,899	-1,334
Above Normal (16%)	-313	-4,138	22,434	1,350	9,725	3,749	-3,388	-1,593	-3,261	-818	-2,296
Below Normal (13%)	-540	-5,657	-1,582	988	10,025	-513	-7,818	-480	-5,951	-3,203	-6,261
Dry (24%)	-1,211	1,446	-491	-1,618	10,967	508	-610	16	711	-1,748	-3,126
Critical (15%)	1,231	414	-2,183	754	2,847	-36	-710	1,737	701	1	-412

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-19-2. Sacramento River Keswick to Battle Creek Winter-run Juvenile Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)										
Statistic	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Probability of Exceedance[a]											
10%	281,409	310,548	333,866	332,325	333,147	334,345	343,635	406,001	337,232	333,331	327,278
20%	275,553	304,116	333,613	329,892	332,381	333,897	334,074	345,721	334,537	332,947	320,140
30%	273,347	301,490	333,204	324,327	331,691	333,630	333,823	334,173	334,164	331,465	318,857
40%	271,058	296,100	325,708	319,153	325,671	333,011	333,510	333,834	333,782	327,257	317,814
50%	270,255	290,552	318,898	317,858	317,290	332,534	332,839	333,548	333,053	321,915	314,448
60%	269,605	286,716	302,253	314,069	311,767	332,361	332,294	333,096	332,276	319,453	310,951
70%	269,298	282,110	282,624	310,607	301,862	332,133	330,936	332,329	330,796	317,580	308,312
80%	268,669	280,522	275,260	307,905	283,840	319,063	330,384	330,323	316,822	312,690	302,041
90%	267,972	276,033	270,850	299,056	276,503	294,114	295,991	313,048	277,019	290,194	292,622
Long Term											
Full Simulation Period[b]	273,329	292,177	307,770	316,470	312,474	328,615	331,119	339,565	327,071	320,338	311,336
Water Year Types[c]											
Wet (32%)	272,361	288,310	276,743	312,401	309,295	323,698	336,149	351,851	326,362	319,734	305,516
Above Normal (16%)	269,796	285,110	298,518	317,662	308,331	328,318	319,568	348,458	315,498	317,233	311,676
Below Normal (13%)	270,444	286,371	326,567	314,953	310,253	331,533	332,329	321,114	328,121	323,284	312,272
Dry (24%)	273,990	300,321	330,631	316,127	314,960	331,492	329,935	332,518	331,233	325,539	314,892
Critical (15%)	280,799	299,959	329,688	325,958	321,745	332,123	333,597	331,969	333,247	313,644	316,790

Alternative 3

	Monthly WUA (Feet2)										
Statistic	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Probability of Exceedance[a]											
10%	281,548	306,963	333,805	332,323	333,602	342,915	345,788	408,067	337,808	333,426	322,181
20%	275,511	303,288	333,638	331,230	332,429	333,955	334,158	345,716	334,451	332,869	319,374
30%	273,778	295,705	333,364	326,457	332,317	333,634	333,865	334,108	334,183	331,604	318,125
40%	270,719	291,787	328,825	321,318	332,039	332,602	333,617	333,807	333,766	326,289	315,598
50%	269,805	289,384	322,723	318,089	328,566	332,381	332,947	333,536	332,924	320,368	312,735
60%	269,405	282,507	320,687	315,120	322,132	332,255	332,368	333,082	332,035	318,759	310,043
70%	269,239	279,447	318,959	310,972	318,054	332,037	331,005	332,140	329,953	316,628	304,355
80%	268,649	277,139	310,908	306,464	316,630	318,232	313,664	329,969	316,335	311,042	297,645
90%	267,841	275,321	302,839	300,568	310,263	309,357	287,114	308,295	275,987	288,602	286,112
Long Term											
Full Simulation Period[b]	273,315	289,425	320,558	317,225	323,890	329,958	330,105	339,427	326,624	319,463	308,895
Water Year Types[c]											
Wet (32%)	272,651	284,467	310,731	316,511	324,124	326,847	337,561	350,404	327,524	318,259	304,066
Above Normal (16%)	269,576	283,384	321,533	317,898	318,247	331,592	316,716	349,512	314,660	317,016	309,106
Below Normal (13%)	270,117	282,030	316,413	316,212	321,720	330,987	324,678	320,744	322,213	320,989	306,539
Dry (24%)	272,529	298,461	330,348	312,928	325,860	331,104	329,962	333,292	331,672	325,077	311,754
Critical (15%)	283,046	298,427	328,275	326,133	328,202	332,073	333,669	332,070	333,264	313,965	316,526

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)										
Statistic	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Probability of Exceedance[a]											
10%	139	-3,585	-61	-2	455	8,570	2,152	2,066	576	95	-5,097
20%	-42	-829	25	1,337	48	57	84	-5	-87	-78	-766
30%	431	-5,785	160	2,131	626	4	42	-65	19	139	-731
40%	-338	-4,312	3,117	2,165	6,367	-409	107	-27	-17	-968	-2,216
50%	-450	-1,168	3,825	231	11,276	-154	108	-12	-129	-1,547	-1,713
60%	-200	-4,208	18,434	1,051	10,365	-106	74	-14	-242	-694	-909
70%	-58	-2,662	36,335	365	16,192	-96	69	-189	-843	-952	-3,956
80%	-20	-3,383	35,648	-1,440	32,790	-831	-16,721	-354	-487	-1,648	-4,397
90%	-130	-712	31,989	1,511	33,759	15,242	-8,878	-4,753	-1,032	-1,592	-6,510
Long Term											
Full Simulation Period[b]	-14	-2,752	12,788	754	11,416	1,342	-1,014	-138	-448	-875	-2,440
Water Year Types[c]											
Wet (32%)	290	-3,843	33,988	4,109	14,829	3,149	1,411	-1,447	1,162	-1,475	-1,450
Above Normal (16%)	-220	-1,726	23,015	236	9,917	3,274	-2,852	1,053	-839	-216	-2,570
Below Normal (13%)	-327	-4,340	-10,154	1,258	11,467	-546	-7,651	-369	-5,909	-2,296	-5,734
Dry (24%)	-1,460	-1,860	-283	-3,200	10,901	-388	27	774	439	-462	-3,138
Critical (15%)	2,248	-1,532	-1,413	175	6,457	-50	72	100	18	321	-264

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-19-3. Sacramento River Keswick to Battle Creek Winter-run Juvenile Rearing WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)										
Statistic	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Probability of Exceedance[a]											
10%	281,409	310,548	333,866	332,325	333,147	334,345	343,635	406,001	337,232	333,331	327,278
20%	275,553	304,116	333,613	329,892	332,381	333,897	334,074	345,721	334,537	332,947	320,140
30%	273,347	301,490	333,204	324,327	331,691	333,630	333,823	334,173	334,164	331,465	318,857
40%	271,058	296,100	325,708	319,153	325,671	333,011	333,510	333,834	333,782	327,257	317,814
50%	270,255	290,552	318,898	317,858	317,290	332,534	332,839	333,548	333,053	321,915	314,448
60%	269,605	286,716	302,253	314,069	311,767	332,361	332,294	333,096	332,276	319,453	310,951
70%	269,298	282,110	282,624	310,607	301,862	332,133	330,936	332,329	330,796	317,580	308,312
80%	268,669	280,522	275,260	307,905	283,840	319,063	330,384	330,323	316,822	312,690	302,041
90%	267,972	276,033	270,850	299,056	276,503	294,114	295,991	313,048	277,019	290,194	292,622
Long Term											
Full Simulation Period[b]	273,329	292,177	307,770	316,470	312,474	328,615	331,119	339,565	327,071	320,338	311,336
Water Year Types[c]											
Wet (32%)	272,361	288,310	276,743	312,401	309,295	323,698	336,149	351,851	326,362	319,734	305,516
Above Normal (16%)	269,796	285,110	298,518	317,662	308,331	328,318	319,568	348,458	315,498	317,233	311,676
Below Normal (13%)	270,444	286,371	326,567	314,953	310,253	331,533	332,329	321,114	328,121	323,284	312,272
Dry (24%)	273,990	300,321	330,631	316,127	314,960	331,492	329,935	332,518	331,233	325,539	314,892
Critical (15%)	280,799	299,959	329,688	325,958	321,745	332,123	333,597	331,969	333,247	313,644	316,790

Alternative 5

	Monthly WUA (Feet2)										
Statistic	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Probability of Exceedance[a]											
10%	281,614	309,760	333,644	332,324	333,248	334,335	343,636	404,698	337,234	333,331	327,047
20%	275,546	305,085	333,530	326,377	332,395	333,889	334,131	345,858	334,536	332,947	320,076
30%	271,881	297,690	331,233	323,695	332,056	333,638	333,818	334,165	334,160	331,462	319,158
40%	270,896	294,640	324,022	318,911	325,408	333,025	333,529	333,827	333,780	327,527	318,043
50%	269,993	289,826	319,077	317,828	317,393	332,534	332,767	333,550	332,901	322,687	314,900
60%	269,522	285,237	303,604	314,451	311,105	332,386	332,296	333,105	332,292	319,462	311,269
70%	269,127	281,290	283,038	311,554	302,699	332,164	330,813	332,326	330,800	317,595	309,406
80%	268,430	279,532	275,283	308,452	284,296	319,923	324,619	330,321	316,824	312,705	305,843
90%	267,935	275,908	270,849	299,072	276,548	293,411	295,987	313,022	277,018	294,681	296,195
Long Term											
Full Simulation Period[b]	273,023	291,158	307,533	316,163	312,649	328,449	331,075	339,618	327,024	320,862	312,618
Water Year Types[c]											
Wet (32%)	272,131	288,249	276,894	312,809	308,867	323,073	335,856	351,959	326,489	319,729	305,490
Above Normal (16%)	270,004	285,571	299,452	316,353	308,887	327,918	319,903	348,226	315,369	317,233	312,228
Below Normal (13%)	270,444	287,598	325,805	314,908	310,401	331,677	332,253	321,556	328,058	322,983	312,751
Dry (24%)	273,852	297,208	330,152	316,163	315,514	331,644	329,932	332,499	330,991	326,277	318,479
Critical (15%)	279,206	296,694	328,224	324,373	322,201	332,386	333,646	331,977	333,254	316,278	318,592

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)										
Statistic	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Probability of Exceedance[a]											
10%	204	-788	-222	-1	101	-10	0	-1,303	2	0	-231
20%	-7	969	-83	-3,515	14	-8	57	137	-1	1	-64
30%	-1,466	-3,799	-1,971	-632	365	8	-5	-8	-3	-3	301
40%	-162	-1,459	-1,686	-242	-264	13	19	-8	-2	270	230
50%	-263	-725	179	-30	103	0	-72	2	-152	772	452
60%	-83	-1,479	1,351	382	-662	25	2	8	16	10	318
70%	-171	-819	413	948	837	31	-123	-3	4	15	1,094
80%	-239	-989	23	547	456	860	-5,766	-2	2	15	3,802
90%	-37	-125	0	16	45	-703	-4	-26	0	4,486	3,573
Long Term											
Full Simulation Period[b]	-307	-1,019	-237	-308	175	-167	-44	53	-47	524	1,282
Water Year Types[c]											
Wet (32%)	-230	-60	151	407	-428	-625	-294	108	127	-5	-26
Above Normal (16%)	208	461	934	-1,309	556	-400	335	-232	-130	0	552
Below Normal (13%)	0	1,227	-762	-45	148	145	-76	443	-64	-301	479
Dry (24%)	-138	-3,113	-479	36	555	152	-3	-19	-242	738	3,587
Critical (15%)	-1,593	-3,265	-1,464	-1,585	457	263	49	8	7	2,635	1,802

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-19-4. Sacramento River Keswick to Battle Creek Winter-run Juvenile Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)										
Statistic	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Probability of Exceedance[a]											
10%	281,861	310,030	333,916	332,462	333,251	343,398	343,713	407,678	337,747	333,424	322,687
20%	275,528	303,298	333,677	332,262	332,422	333,942	334,139	345,715	334,450	332,945	319,420
30%	271,975	298,945	333,445	326,577	332,262	333,598	333,805	334,195	334,169	331,224	318,162
40%	270,836	291,693	327,495	321,166	332,033	332,602	333,617	333,764	333,829	324,649	315,156
50%	269,910	286,071	324,919	318,776	324,963	332,433	332,740	333,331	333,016	320,063	312,731
60%	269,393	281,520	321,632	316,937	320,479	332,284	332,316	333,015	332,315	318,349	309,902
70%	269,168	278,857	320,301	310,233	317,892	332,146	330,865	332,257	330,122	316,027	307,003
80%	268,792	275,515	319,024	307,164	313,820	319,033	311,693	329,961	316,821	311,002	297,967
90%	268,269	273,309	299,287	300,948	309,156	307,873	286,720	306,586	275,987	288,344	286,561
Long Term											
Full Simulation Period[b]	273,191	289,077	321,770	317,799	323,011	330,202	329,440	339,047	326,400	318,751	308,886
Water Year Types[c]											
Wet (32%)	272,674	281,693	311,734	316,396	323,673	326,669	336,654	350,402	327,521	317,836	304,182
Above Normal (16%)	269,483	280,972	320,951	319,012	318,055	332,067	316,180	346,866	312,237	316,414	309,380
Below Normal (13%)	269,903	280,714	324,984	315,941	320,277	331,020	324,511	320,633	322,170	320,081	306,012
Dry (24%)	272,778	301,767	330,140	314,509	325,926	332,000	329,325	332,534	331,944	323,790	311,766
Critical (15%)	282,030	300,373	327,505	326,712	324,592	332,086	332,887	333,706	333,948	313,645	316,378

No Action Alternative

	Monthly WUA (Feet2)										
Statistic	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Probability of Exceedance[a]											
10%	281,409	310,548	333,866	332,325	333,147	334,345	343,635	406,001	337,232	333,331	327,278
20%	275,553	304,116	333,613	329,892	332,381	333,897	334,074	345,721	334,537	332,947	320,140
30%	273,347	301,490	333,204	324,327	331,691	333,630	333,823	334,173	334,164	331,465	318,857
40%	271,058	296,100	325,708	319,153	325,671	333,011	333,510	333,834	333,782	327,257	317,814
50%	270,255	290,552	318,898	317,858	317,290	332,534	332,839	333,548	333,053	321,915	314,448
60%	269,605	286,716	302,253	314,069	311,767	332,361	332,294	333,096	332,276	319,453	310,951
70%	269,298	282,110	282,624	310,607	301,862	332,133	330,936	332,329	330,796	317,580	308,312
80%	268,669	280,522	275,260	307,905	283,840	319,063	330,384	330,323	316,822	312,690	302,041
90%	267,972	276,033	270,850	299,056	276,503	294,114	295,991	313,048	277,019	290,194	292,622
Long Term											
Full Simulation Period[b]	273,329	292,177	307,770	316,470	312,474	328,615	331,119	339,565	327,071	320,338	311,336
Water Year Types[c]											
Wet (32%)	272,361	288,310	276,743	312,401	309,295	323,698	336,149	351,851	326,362	319,734	305,516
Above Normal (16%)	269,796	285,110	298,518	317,662	308,331	328,318	319,568	348,458	315,498	317,233	311,676
Below Normal (13%)	270,444	286,371	326,567	314,953	310,253	331,533	332,329	321,114	328,121	323,284	312,272
Dry (24%)	273,990	300,321	330,631	316,127	314,960	331,492	329,935	332,518	331,233	325,539	314,892
Critical (15%)	280,799	299,959	329,688	325,958	321,745	332,123	333,597	331,969	333,247	313,644	316,790

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)										
Statistic	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Probability of Exceedance[a]											
10%	-452	518	-50	-137	-104	-9,054	-78	-1,677	-515	-92	4,591
20%	25	818	-65	-2,370	-41	-45	-65	6	87	1	720
30%	1,373	2,545	-241	-2,250	-571	32	18	-22	-5	241	695
40%	222	4,407	-1,787	-2,013	-6,362	410	-107	71	-47	2,608	2,657
50%	346	4,480	-6,020	-919	-7,673	101	99	217	37	1,852	1,717
60%	212	5,196	-19,379	-2,868	-8,712	78	-22	81	-38	1,104	1,049
70%	129	3,253	-37,677	374	-16,030	-13	71	72	674	1,552	1,309
80%	-123	5,007	-43,763	741	-29,980	30	18,691	362	1	1,688	4,074
90%	-298	2,723	-28,437	-1,892	-32,652	-13,759	9,272	6,462	1,032	1,850	6,061
Long Term											
Full Simulation Period[b]	138	3,099	-14,000	-1,329	-10,537	-1,586	1,679	518	672	1,588	2,450
Water Year Types[c]											
Wet (32%)	-313	6,616	-34,991	-3,995	-14,379	-2,971	-504	1,449	-1,159	1,899	1,334
Above Normal (16%)	313	4,138	-22,434	-1,350	-9,725	-3,749	3,388	1,593	3,261	818	2,296
Below Normal (13%)	540	5,657	1,582	-988	-10,025	513	7,818	480	5,951	3,203	6,261
Dry (24%)	1,211	-1,446	491	1,618	-10,967	-508	610	-16	-711	1,748	3,126
Critical (15%)	-1,231	-414	2,183	-754	-2,847	36	710	-1,737	-701	-1	412

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-19-5. Sacramento River Keswick to Battle Creek Winter-run Juvenile Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)										
Statistic	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Probability of Exceedance[a]											
10%	281,861	310,030	333,916	332,462	333,251	343,398	343,713	407,678	337,747	333,424	322,687
20%	275,528	303,298	333,677	332,262	332,422	333,942	334,139	345,715	334,450	332,945	319,420
30%	271,975	298,945	333,445	326,577	332,262	333,598	333,805	334,195	334,169	331,224	318,162
40%	270,836	291,693	327,495	321,166	332,033	332,602	333,617	333,764	333,829	324,649	315,156
50%	269,910	286,071	324,919	318,776	324,963	332,433	332,740	333,331	333,016	320,063	312,731
60%	269,393	281,520	321,632	316,937	320,479	332,284	332,316	333,015	332,315	318,349	309,902
70%	269,168	278,857	320,301	310,233	317,892	332,146	330,865	332,257	330,122	316,027	307,003
80%	268,792	275,515	319,024	307,164	313,820	319,033	311,693	329,961	316,821	311,002	297,967
90%	268,269	273,309	299,287	300,948	309,156	307,873	286,720	306,586	275,987	288,344	286,561
Long Term											
Full Simulation Period[b]	273,191	289,077	321,770	317,799	323,011	330,202	329,440	339,047	326,400	318,751	308,886
Water Year Types[c]											
Wet (32%)	272,674	281,693	311,734	316,396	323,673	326,669	336,654	350,402	327,521	317,836	304,182
Above Normal (16%)	269,483	280,972	320,951	319,012	318,055	332,067	316,180	346,866	312,237	316,414	309,380
Below Normal (13%)	269,903	280,714	324,984	315,941	320,277	331,020	324,511	320,633	322,170	320,081	306,012
Dry (24%)	272,778	301,767	330,140	314,509	325,926	332,000	329,325	332,534	331,944	323,790	311,766
Critical (15%)	282,030	300,373	327,505	326,712	324,592	332,086	332,887	333,706	333,948	313,645	316,378

Alternative 3

	Monthly WUA (Feet2)										
Statistic	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Probability of Exceedance[a]											
10%	281,548	306,963	333,805	332,323	333,602	342,915	345,788	408,067	337,808	333,426	322,181
20%	275,511	303,288	333,638	331,230	332,429	333,955	334,158	345,716	334,451	332,869	319,374
30%	273,778	295,705	333,364	326,457	332,317	333,634	333,865	334,108	334,183	331,604	318,125
40%	270,719	291,787	328,825	321,318	332,039	332,602	333,617	333,807	333,766	326,289	315,598
50%	269,805	289,384	322,723	318,089	328,566	332,381	332,947	333,536	332,924	320,368	312,735
60%	269,405	282,507	320,687	315,120	322,132	332,255	332,368	333,082	332,035	318,759	310,043
70%	269,239	279,447	318,959	310,972	318,054	332,037	331,005	332,140	329,953	316,628	304,355
80%	268,649	277,139	310,908	306,464	316,630	318,232	313,664	329,969	316,335	311,042	297,645
90%	267,841	275,321	302,839	300,568	310,263	309,357	287,114	308,295	275,987	288,602	286,112
Long Term											
Full Simulation Period[b]	273,315	289,425	320,558	317,225	323,890	329,958	330,105	339,427	326,624	319,463	308,895
Water Year Types[c]											
Wet (32%)	272,651	284,467	310,731	316,511	324,124	326,847	337,561	350,404	327,524	318,259	304,066
Above Normal (16%)	269,576	283,384	321,533	317,898	318,247	331,592	316,716	349,512	314,660	317,016	309,106
Below Normal (13%)	270,117	282,030	316,413	316,212	321,720	330,987	324,678	320,744	322,213	320,989	306,539
Dry (24%)	272,529	298,461	330,348	312,928	325,860	331,104	329,962	333,292	331,672	325,077	311,754
Critical (15%)	283,046	298,427	328,275	326,133	328,202	332,073	333,669	332,070	333,264	313,965	316,526

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)										
Statistic	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Probability of Exceedance[a]											
10%	-313	-3,067	-111	-139	352	-483	2,074	389	61	2	-507
20%	-17	-11	-40	-1,033	8	13	19	1	0	-77	-46
30%	1,804	-3,240	-81	-120	56	36	60	-87	14	380	-37
40%	-117	94	1,330	152	5	0	0	43	-63	1,640	441
50%	-104	3,312	-2,196	-687	3,603	-53	208	205	-92	304	5
60%	12	988	-945	-1,818	1,653	-28	52	67	-280	410	141
70%	71	591	-1,341	739	162	-109	140	-117	-168	600	-2,648
80%	-143	1,624	-8,116	-699	2,810	-801	1,971	8	-486	40	-323
90%	-428	2,011	3,552	-380	1,107	1,484	394	1,709	0	258	-449
Long Term											
Full Simulation Period[b]	124	347	-1,212	-575	879	-244	665	380	224	712	9
Water Year Types[c]											
Wet (32%)	-23	2,773	-1,003	114	450	178	907	2	3	424	-116
Above Normal (16%)	93	2,412	582	-1,114	192	-475	535	2,646	2,423	602	-274
Below Normal (13%)	213	1,317	-8,572	271	1,442	-33	168	111	42	908	527
Dry (24%)	-249	-3,306	208	-1,582	-66	-896	637	758	-273	1,287	-12
Critical (15%)	1,016	-1,946	770	-579	3,610	-13	782	-1,637	-684	320	149

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-19-6. Sacramento River Keswick to Battle Creek Winter-run Juvenile Rearing WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)										
Statistic	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Probability of Exceedance[a]											
10%	281,861	310,030	333,916	332,462	333,251	343,398	343,713	407,678	337,747	333,424	322,687
20%	275,528	303,298	333,677	332,262	332,422	333,942	334,139	345,715	334,450	332,945	319,420
30%	271,975	298,945	333,445	326,577	332,262	333,598	333,805	334,195	334,169	331,224	318,162
40%	270,836	291,693	327,495	321,166	332,033	332,602	333,617	333,764	333,829	324,649	315,156
50%	269,910	286,071	324,919	318,776	324,963	332,433	332,740	333,331	333,016	320,063	312,731
60%	269,393	281,520	321,632	316,937	320,479	332,284	332,316	333,015	332,315	318,349	309,902
70%	269,168	278,857	320,301	310,233	317,892	332,146	330,865	332,257	330,122	316,027	307,003
80%	268,792	275,515	319,024	307,164	313,820	319,033	311,693	329,961	316,821	311,002	297,967
90%	268,269	273,309	299,287	300,948	309,156	307,873	286,720	306,586	275,987	288,344	286,561
Long Term											
Full Simulation Period[b]	273,191	289,077	321,770	317,799	323,011	330,202	329,440	339,047	326,400	318,751	308,886
Water Year Types[c]											
Wet (32%)	272,674	281,693	311,734	316,396	323,673	326,669	336,654	350,402	327,521	317,836	304,182
Above Normal (16%)	269,483	280,972	320,951	319,012	318,055	332,067	316,180	346,866	312,237	316,414	309,380
Below Normal (13%)	269,903	280,714	324,984	315,941	320,277	331,020	324,511	320,633	322,170	320,081	306,012
Dry (24%)	272,778	301,767	330,140	314,509	325,926	332,000	329,325	332,534	331,944	323,790	311,766
Critical (15%)	282,030	300,373	327,505	326,712	324,592	332,086	332,887	333,706	333,948	313,645	316,378

Alternative 5

	Monthly WUA (Feet2)										
Statistic	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Probability of Exceedance[a]											
10%	281,614	309,760	333,644	332,324	333,248	334,335	343,636	404,698	337,234	333,331	327,047
20%	275,546	305,085	333,530	326,377	332,395	333,889	334,131	345,858	334,536	332,947	320,076
30%	271,881	297,690	331,233	323,695	332,056	333,638	333,818	334,165	334,160	331,462	319,158
40%	270,896	294,640	324,022	318,911	325,408	333,025	333,529	333,827	333,780	327,527	318,043
50%	269,993	289,826	319,077	317,828	317,393	332,534	332,767	333,550	332,901	322,687	314,900
60%	269,522	285,237	303,604	314,451	311,105	332,386	332,296	333,105	332,292	319,462	311,269
70%	269,127	281,290	283,038	311,554	302,699	332,164	330,813	332,326	330,800	317,595	309,406
80%	268,430	279,532	275,283	308,452	284,296	319,923	324,619	330,321	316,824	312,705	305,843
90%	267,935	275,908	270,849	299,072	276,548	293,411	295,987	313,022	277,018	294,681	296,195
Long Term											
Full Simulation Period[b]	273,023	291,158	307,533	316,163	312,649	328,449	331,075	339,618	327,024	320,862	312,618
Water Year Types[c]											
Wet (32%)	272,131	288,249	276,894	312,809	308,867	323,073	335,856	351,959	326,489	319,729	305,490
Above Normal (16%)	270,004	285,571	299,452	316,353	308,887	327,918	319,903	348,226	315,369	317,233	312,228
Below Normal (13%)	270,444	287,598	325,805	314,908	310,401	331,677	332,253	321,556	328,058	322,983	312,751
Dry (24%)	273,852	297,208	330,152	316,163	315,514	331,644	329,932	332,499	330,991	326,277	318,479
Critical (15%)	279,206	296,694	328,224	324,373	322,201	332,386	333,646	331,977	333,254	316,278	318,592

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)										
Statistic	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Probability of Exceedance[a]											
10%	-248	-270	-272	-138	-3	-9,063	-78	-2,979	-513	-93	4,360
20%	18	1,787	-148	-5,885	-27	-53	-8	144	86	2	656
30%	-93	-1,255	-2,212	-2,882	-206	40	13	-31	-8	238	996
40%	60	2,948	-3,473	-2,255	-6,625	423	-88	63	-49	2,878	2,887
50%	83	3,755	-5,842	-949	-7,569	101	28	219	-115	2,624	2,169
60%	129	3,717	-18,028	-2,486	-9,374	102	-20	89	-22	1,114	1,367
70%	-42	2,433	-37,263	1,322	-15,193	18	-53	69	678	1,567	2,403
80%	-362	4,018	-43,741	1,288	-29,524	890	12,925	360	3	1,703	7,876
90%	-334	2,598	-28,438	-1,876	-32,608	-14,462	9,268	6,436	1,031	6,336	9,633
Long Term											
Full Simulation Period[b]	-168	2,081	-14,237	-1,637	-10,362	-1,753	1,635	572	625	2,111	3,732
Water Year Types[c]											
Wet (32%)	-543	6,556	-34,840	-3,588	-14,806	-3,596	-798	1,557	-1,032	1,894	1,308
Above Normal (16%)	521	4,599	-21,499	-2,659	-9,169	-4,149	3,723	1,360	3,132	819	2,849
Below Normal (13%)	541	6,884	820	-1,033	-9,877	657	7,742	923	5,887	2,902	6,739
Dry (24%)	1,073	-4,559	12	1,654	-10,412	-356	608	-35	-953	2,486	6,713
Critical (15%)	-2,824	-3,679	719	-2,339	-2,390	299	759	-1,729	-694	2,633	2,215

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.20. Sacramento River Keswick to Battle Creek Steelhead Spawning WUA

Table C-20-1. Sacramento River Keswick to Battle Creek Steelhead Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	284,003	283,850	283,906	283,720	288,661
20%	283,181	282,795	282,695	282,397	287,127
30%	282,459	282,332	279,490	281,396	284,250
40%	282,376	278,850	278,481	277,972	283,373
50%	282,141	278,118	277,975	277,095	282,287
60%	278,213	277,481	277,014	275,560	280,816
70%	277,640	267,834	211,869	264,478	277,970
80%	244,866	184,430	55,367	185,310	265,132
90%	107,093	64,327	32,581	79,382	229,156
Long Term					
Full Simulation Period[b]	247,895	233,554	212,942	237,022	265,821
Water Year Types[c]					
Wet (32%)	192,399	159,564	152,615	171,965	241,241
Above Normal (16%)	247,134	234,295	145,325	237,752	271,943
Below Normal (13%)	283,008	281,449	242,651	273,115	282,683
Dry (24%)	281,745	275,791	279,846	277,609	279,748
Critical (15%)	280,361	278,767	278,161	276,459	273,780

Alternative 1

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	283,825	283,692	283,688	283,752	288,534
20%	283,110	282,670	282,430	282,403	287,353
30%	282,562	282,084	280,077	281,381	285,527
40%	282,388	278,318	278,535	277,864	282,953
50%	282,032	277,926	277,845	277,120	281,603
60%	278,253	277,179	276,604	275,295	280,577
70%	277,460	251,254	166,379	260,748	277,249
80%	198,591	121,599	55,376	172,463	261,272
90%	66,294	63,045	32,413	76,741	229,829
Long Term					
Full Simulation Period[b]	240,825	226,093	210,150	234,149	265,878
Water Year Types[c]					
Wet (32%)	168,495	147,240	149,720	171,420	242,092
Above Normal (16%)	250,290	218,468	138,235	225,962	271,985
Below Normal (13%)	283,338	272,964	236,455	263,040	279,616
Dry (24%)	281,639	276,021	279,970	279,003	280,203
Critical (15%)	280,295	279,024	278,508	277,688	274,335

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	-178	-158	-219	32	-127
20%	-72	-125	-265	6	226
30%	103	-248	587	-15	1,277
40%	12	-532	54	-108	-419
50%	-109	-192	-130	25	-684
60%	40	-302	-410	-265	-239
70%	-180	-16,580	-45,490	-3,730	-721
80%	-46,276	-62,830	9	-12,847	-3,861
90%	-40,799	-1,282	-169	-2,641	672
Long Term					
Full Simulation Period[b]	-7,070	-7,461	-2,792	-2,874	57
Water Year Types[c]					
Wet (32%)	-23,903	-12,323	-2,895	-545	851
Above Normal (16%)	3,156	-15,827	-7,090	-11,790	42
Below Normal (13%)	330	-8,485	-6,195	-10,075	-3,067
Dry (24%)	-106	230	124	1,394	455
Critical (15%)	-66	257	347	1,230	555

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-20-2. Sacramento River Keswick to Battle Creek Steelhead Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	284,003	283,850	283,906	283,720	288,661
20%	283,181	282,795	282,695	282,397	287,127
30%	282,459	282,332	279,490	281,396	284,250
40%	282,376	278,850	278,481	277,972	283,373
50%	282,141	278,118	277,975	277,095	282,287
60%	278,213	277,481	277,014	275,560	280,816
70%	277,640	267,834	211,869	264,478	277,970
80%	244,866	184,430	55,367	185,310	265,132
90%	107,093	64,327	32,581	79,382	229,156
Long Term					
Full Simulation Period[b]	247,895	233,554	212,942	237,022	265,821
Water Year Types[c]					
Wet (32%)	192,399	159,564	152,615	171,965	241,241
Above Normal (16%)	247,134	234,295	145,325	237,752	271,943
Below Normal (13%)	283,008	281,449	242,651	273,115	282,683
Dry (24%)	281,745	275,791	279,846	277,609	279,748
Critical (15%)	280,361	278,767	278,161	276,459	273,780

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	284,086	283,694	283,700	283,704	288,883
20%	283,245	282,654	282,435	282,378	287,252
30%	282,724	282,080	279,196	280,380	284,215
40%	282,459	278,345	278,348	277,833	283,083
50%	282,147	277,802	277,801	276,976	282,043
60%	278,265	277,210	276,618	275,187	280,823
70%	277,537	251,649	175,771	260,051	277,242
80%	197,415	122,335	55,377	172,624	261,399
90%	65,797	55,625	32,308	76,698	229,934
Long Term					
Full Simulation Period[b]	240,753	226,253	211,064	233,536	265,789
Water Year Types[c]					
Wet (32%)	168,150	146,128	149,722	171,421	241,868
Above Normal (16%)	249,835	222,219	143,070	223,943	271,783
Below Normal (13%)	283,380	273,509	238,589	262,750	279,640
Dry (24%)	282,007	275,752	279,462	278,712	280,243
Critical (15%)	280,392	278,414	278,402	276,442	274,339

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	84	-157	-206	-16	221
20%	64	-141	-260	-19	125
30%	265	-252	-294	-1,016	-35
40%	83	-505	-133	-139	-289
50%	6	-316	-174	-119	-243
60%	52	-272	-397	-374	7
70%	-103	-16,185	-36,098	-4,428	-729
80%	-47,452	-62,095	10	-12,686	-3,734
90%	-41,296	-8,702	-273	-2,685	778
Long Term					
Full Simulation Period[b]	-7,142	-7,301	-1,878	-3,486	-32
Water Year Types[c]					
Wet (32%)	-24,249	-13,436	-2,893	-544	627
Above Normal (16%)	2,701	-12,076	-2,255	-13,809	-160
Below Normal (13%)	372	-7,940	-4,062	-10,365	-3,043
Dry (24%)	262	-39	-384	1,103	495
Critical (15%)	31	-354	240	-17	560

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-20-3. Sacramento River Keswick to Battle Creek Steelhead Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	284,003	283,850	283,906	283,720	288,661
20%	283,181	282,795	282,695	282,397	287,127
30%	282,459	282,332	279,490	281,396	284,250
40%	282,376	278,850	278,481	277,972	283,373
50%	282,141	278,118	277,975	277,095	282,287
60%	278,213	277,481	277,014	275,560	280,816
70%	277,640	267,834	211,869	264,478	277,970
80%	244,866	184,430	55,367	185,310	265,132
90%	107,093	64,327	32,581	79,382	229,156
Long Term					
Full Simulation Period[b]	247,895	233,554	212,942	237,022	265,821
Water Year Types[c]					
Wet (32%)	192,399	159,564	152,615	171,965	241,241
Above Normal (16%)	247,134	234,295	145,325	237,752	271,943
Below Normal (13%)	283,008	281,449	242,651	273,115	282,683
Dry (24%)	281,745	275,791	279,846	277,609	279,748
Critical (15%)	280,361	278,767	278,161	276,459	273,780

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	283,695	283,872	283,905	283,719	288,857
20%	283,071	282,793	282,644	282,397	287,345
30%	282,458	282,342	279,474	281,412	284,024
40%	282,387	278,745	278,479	277,976	283,374
50%	282,150	278,033	277,977	277,096	282,292
60%	278,212	277,370	277,020	275,566	280,871
70%	277,590	267,152	213,137	264,485	278,054
80%	246,462	185,037	55,368	184,434	266,196
90%	112,101	64,324	32,936	79,380	229,953
Long Term					
Full Simulation Period[b]	247,897	233,696	212,856	236,783	266,445
Water Year Types[c]					
Wet (32%)	192,944	160,365	152,776	171,721	241,242
Above Normal (16%)	246,417	233,814	145,163	237,223	271,959
Below Normal (13%)	282,882	281,513	241,731	273,125	283,015
Dry (24%)	281,699	275,796	279,874	277,282	279,778
Critical (15%)	280,159	278,454	278,199	276,460	277,667

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	-308	22	-1	0	195
20%	-110	-2	-51	0	218
30%	-1	11	-17	17	-226
40%	11	-105	-2	4	1
50%	10	-85	2	1	5
60%	-2	-111	6	6	55
70%	-50	-682	1,268	7	84
80%	1,596	607	1	-876	1,063
90%	5,007	-3	355	-2	797
Long Term					
Full Simulation Period[b]	1	142	-86	-240	623
Water Year Types[c]					
Wet (32%)	545	801	161	-245	1
Above Normal (16%)	-717	-481	-162	-529	16
Below Normal (13%)	-126	64	-920	10	331
Dry (24%)	-46	5	28	-327	30
Critical (15%)	-203	-313	37	1	3,888

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-20-4. Sacramento River Keswick to Battle Creek Steelhead Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	283,825	283,692	283,688	283,752	288,534
20%	283,110	282,670	282,430	282,403	287,353
30%	282,562	282,084	280,077	281,381	285,527
40%	282,388	278,318	278,535	277,864	282,953
50%	282,032	277,926	277,845	277,120	281,603
60%	278,253	277,179	276,604	275,295	280,577
70%	277,460	251,254	166,379	260,748	277,249
80%	198,591	121,599	55,376	172,463	261,272
90%	66,294	63,045	32,413	76,741	229,829
Long Term					
Full Simulation Period[b]	240,825	226,093	210,150	234,149	265,878
Water Year Types[c]					
Wet (32%)	168,495	147,240	149,720	171,420	242,092
Above Normal (16%)	250,290	218,468	138,235	225,962	271,985
Below Normal (13%)	283,338	272,964	236,455	263,040	279,616
Dry (24%)	281,639	276,021	279,970	279,003	280,203
Critical (15%)	280,295	279,024	278,508	277,688	274,335

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	284,003	283,850	283,906	283,720	288,661
20%	283,181	282,795	282,695	282,397	287,127
30%	282,459	282,332	279,490	281,396	284,250
40%	282,376	278,850	278,481	277,972	283,373
50%	282,141	278,118	277,975	277,095	282,287
60%	278,213	277,481	277,014	275,560	280,816
70%	277,640	267,834	211,869	264,478	277,970
80%	244,866	184,430	55,367	185,310	265,132
90%	107,093	64,327	32,581	79,382	229,156
Long Term					
Full Simulation Period[b]	247,895	233,554	212,942	237,022	265,821
Water Year Types[c]					
Wet (32%)	192,399	159,564	152,615	171,965	241,241
Above Normal (16%)	247,134	234,295	145,325	237,752	271,943
Below Normal (13%)	283,008	281,449	242,651	273,115	282,683
Dry (24%)	281,745	275,791	279,846	277,609	279,748
Critical (15%)	280,361	278,767	278,161	276,459	273,780

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	178	158	219	-32	127
20%	72	125	265	-6	-226
30%	-103	248	-587	15	-1,277
40%	-12	532	-54	108	419
50%	109	192	130	-25	684
60%	-40	302	410	265	239
70%	180	16,580	45,490	3,730	721
80%	46,276	62,830	-9	12,847	3,861
90%	40,799	1,282	169	2,641	-672
Long Term					
Full Simulation Period[b]	7,070	7,461	2,792	2,874	-57
Water Year Types[c]					
Wet (32%)	23,903	12,323	2,895	545	-851
Above Normal (16%)	-3,156	15,827	7,090	11,790	-42
Below Normal (13%)	-330	8,485	6,195	10,075	3,067
Dry (24%)	106	-230	-124	-1,394	-455
Critical (15%)	66	-257	-347	-1,230	-555

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-20-5. Sacramento River Keswick to Battle Creek Steelhead Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	283,825	283,692	283,688	283,752	288,534
20%	283,110	282,670	282,430	282,403	287,353
30%	282,562	282,084	280,077	281,381	285,527
40%	282,388	278,318	278,535	277,864	282,953
50%	282,032	277,926	277,845	277,120	281,603
60%	278,253	277,179	276,604	275,295	280,577
70%	277,460	251,254	166,379	260,748	277,249
80%	198,591	121,599	55,376	172,463	261,272
90%	66,294	63,045	32,413	76,741	229,829
Long Term					
Full Simulation Period[b]	240,825	226,093	210,150	234,149	265,878
Water Year Types[c]					
Wet (32%)	168,495	147,240	149,720	171,420	242,092
Above Normal (16%)	250,290	218,468	138,235	225,962	271,985
Below Normal (13%)	283,338	272,964	236,455	263,040	279,616
Dry (24%)	281,639	276,021	279,970	279,003	280,203
Critical (15%)	280,295	279,024	278,508	277,688	274,335

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	284,086	283,694	283,700	283,704	288,883
20%	283,245	282,654	282,435	282,378	287,252
30%	282,724	282,080	279,196	280,380	284,215
40%	282,459	278,345	278,348	277,833	283,083
50%	282,147	277,802	277,801	276,976	282,043
60%	278,265	277,210	276,618	275,187	280,823
70%	277,537	251,649	175,771	260,051	277,242
80%	197,415	122,335	55,377	172,624	261,399
90%	65,797	55,625	32,308	76,698	229,934
Long Term					
Full Simulation Period[b]	240,753	226,253	211,064	233,536	265,789
Water Year Types[c]					
Wet (32%)	168,150	146,128	149,722	171,421	241,868
Above Normal (16%)	249,835	222,219	143,070	223,943	271,783
Below Normal (13%)	283,380	273,509	238,589	262,750	279,640
Dry (24%)	282,007	275,752	279,462	278,712	280,243
Critical (15%)	280,392	278,414	278,402	276,442	274,339

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	262	1	12	-48	349
20%	136	-16	5	-25	-101
30%	162	-4	-881	-1,001	-1,312
40%	71	27	-187	-31	130
50%	115	-124	-44	-144	441
60%	12	31	14	-108	246
70%	78	395	9,392	-697	-7
80%	-1,176	736	2	161	127
90%	-497	-7,420	-104	-43	106
Long Term					
Full Simulation Period[b]	-72	160	914	-612	-89
Water Year Types[c]					
Wet (32%)	-346	-1,113	2	1	-224
Above Normal (16%)	-455	3,751	4,835	-2,019	-202
Below Normal (13%)	42	546	2,133	-290	24
Dry (24%)	368	-269	-508	-291	40
Critical (15%)	97	-611	-106	-1,247	5

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-20-6. Sacramento River Keswick to Battle Creek Steelhead Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	283,825	283,692	283,688	283,752	288,534
20%	283,110	282,670	282,430	282,403	287,353
30%	282,562	282,084	280,077	281,381	285,527
40%	282,388	278,318	278,535	277,864	282,953
50%	282,032	277,926	277,845	277,120	281,603
60%	278,253	277,179	276,604	275,295	280,577
70%	277,460	251,254	166,379	260,748	277,249
80%	198,591	121,599	55,376	172,463	261,272
90%	66,294	63,045	32,413	76,741	229,829
Long Term					
Full Simulation Period[b]	240,825	226,093	210,150	234,149	265,878
Water Year Types[c]					
Wet (32%)	168,495	147,240	149,720	171,420	242,092
Above Normal (16%)	250,290	218,468	138,235	225,962	271,985
Below Normal (13%)	283,338	272,964	236,455	263,040	279,616
Dry (24%)	281,639	276,021	279,970	279,003	280,203
Critical (15%)	280,295	279,024	278,508	277,688	274,335

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	283,695	283,872	283,905	283,719	288,857
20%	283,071	282,793	282,644	282,397	287,345
30%	282,458	282,342	279,474	281,412	284,024
40%	282,387	278,745	278,479	277,976	283,374
50%	282,150	278,033	277,977	277,096	282,292
60%	278,212	277,370	277,020	275,566	280,871
70%	277,590	267,152	213,137	264,485	278,054
80%	246,462	185,037	55,368	184,434	266,196
90%	112,101	64,324	32,936	79,380	229,953
Long Term					
Full Simulation Period[b]	247,897	233,696	212,856	236,783	266,445
Water Year Types[c]					
Wet (32%)	192,944	160,365	152,776	171,721	241,242
Above Normal (16%)	246,417	233,814	145,163	237,223	271,959
Below Normal (13%)	282,882	281,513	241,731	273,125	283,015
Dry (24%)	281,699	275,796	279,874	277,282	279,778
Critical (15%)	280,159	278,454	278,199	276,460	277,667

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	-130	180	218	-33	323
20%	-39	123	214	-6	-8
30%	-104	259	-603	31	-1,503
40%	-1	427	-56	112	420
50%	119	108	132	-24	689
60%	-42	191	416	271	294
70%	130	15,898	46,758	3,737	805
80%	47,872	63,437	-8	11,971	4,924
90%	45,806	1,279	523	2,639	124
Long Term					
Full Simulation Period[b]	7,071	7,603	2,706	2,634	566
Water Year Types[c]					
Wet (32%)	24,448	13,125	3,056	301	-850
Above Normal (16%)	-3,873	15,346	6,928	11,261	-26
Below Normal (13%)	-456	8,549	5,275	10,085	3,399
Dry (24%)	61	-225	-96	-1,721	-425
Critical (15%)	-136	-570	-309	-1,228	3,333

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.21. Feather River Low Flow Channel Steelhead Spawning WUA

Table C-21-1. Feather River Low Flow Channel Steelhead Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	989,930	989,930	989,930	989,930	1,031,830
20%	989,930	989,930	989,930	989,930	1,031,830
30%	989,930	989,930	989,930	989,930	1,031,830
40%	989,930	989,930	989,930	989,930	1,031,830
50%	989,930	989,930	989,930	989,930	1,031,830
60%	989,930	989,930	989,930	989,930	1,031,830
70%	989,930	989,930	989,930	989,930	1,031,830
80%	989,930	989,930	989,930	989,930	1,031,830
90%	989,930	989,930	989,930	989,930	1,031,830
Long Term					
Full Simulation Period[b]	989,930	989,930	989,930	989,930	1,031,830
Water Year Types[c]					
Wet (32%)	989,930	989,930	989,930	989,930	1,031,830
Above Normal (16%)	989,930	989,930	989,930	989,930	1,031,830
Below Normal (13%)	989,930	989,930	989,930	989,930	1,031,830
Dry (24%)	989,930	989,930	989,930	989,930	1,031,830
Critical (15%)	989,930	989,930	989,930	989,930	1,031,830

Alternative 1

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	989,930	989,930	989,930	989,930	1,031,830
20%	989,930	989,930	989,930	989,930	1,031,830
30%	989,930	989,930	989,930	989,930	1,031,830
40%	989,930	989,930	989,930	989,930	1,031,830
50%	989,930	989,930	989,930	989,930	1,031,830
60%	989,930	989,930	989,930	989,930	1,031,830
70%	989,930	989,930	989,930	989,930	1,031,830
80%	989,930	989,930	989,930	989,930	1,031,830
90%	989,930	989,930	989,930	989,930	1,031,830
Long Term					
Full Simulation Period[b]	989,930	989,930	989,930	989,930	1,031,830
Water Year Types[c]					
Wet (32%)	989,930	989,930	989,930	989,930	1,031,830
Above Normal (16%)	989,930	989,930	989,930	989,930	1,031,830
Below Normal (13%)	989,930	989,930	989,930	989,930	1,031,830
Dry (24%)	989,930	989,930	989,930	989,930	1,031,830
Critical (15%)	989,930	989,930	989,930	989,930	1,031,830

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-21-2. Feather River Low Flow Channel Steelhead Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	989,930	989,930	989,930	989,930	1,031,830
20%	989,930	989,930	989,930	989,930	1,031,830
30%	989,930	989,930	989,930	989,930	1,031,830
40%	989,930	989,930	989,930	989,930	1,031,830
50%	989,930	989,930	989,930	989,930	1,031,830
60%	989,930	989,930	989,930	989,930	1,031,830
70%	989,930	989,930	989,930	989,930	1,031,830
80%	989,930	989,930	989,930	989,930	1,031,830
90%	989,930	989,930	989,930	989,930	1,031,830
Long Term					
Full Simulation Period[b]	989,930	989,930	989,930	989,930	1,031,830
Water Year Types[c]					
Wet (32%)	989,930	989,930	989,930	989,930	1,031,830
Above Normal (16%)	989,930	989,930	989,930	989,930	1,031,830
Below Normal (13%)	989,930	989,930	989,930	989,930	1,031,830
Dry (24%)	989,930	989,930	989,930	989,930	1,031,830
Critical (15%)	989,930	989,930	989,930	989,930	1,031,830

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	989,930	989,930	989,930	989,930	1,031,830
20%	989,930	989,930	989,930	989,930	1,031,830
30%	989,930	989,930	989,930	989,930	1,031,830
40%	989,930	989,930	989,930	989,930	1,031,830
50%	989,930	989,930	989,930	989,930	1,031,830
60%	989,930	989,930	989,930	989,930	1,031,830
70%	989,930	989,930	989,930	989,930	1,031,830
80%	989,930	989,930	989,930	989,930	1,031,830
90%	989,930	989,930	989,930	989,930	1,031,830
Long Term					
Full Simulation Period[b]	989,930	989,930	989,930	989,930	1,031,830
Water Year Types[c]					
Wet (32%)	989,930	989,930	989,930	989,930	1,031,830
Above Normal (16%)	989,930	989,930	989,930	989,930	1,031,830
Below Normal (13%)	989,930	989,930	989,930	989,930	1,031,830
Dry (24%)	989,930	989,930	989,930	989,930	1,031,830
Critical (15%)	989,930	989,930	989,930	989,930	1,031,830

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-21-3. Feather River Low Flow Channel Steelhead Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	989,930	989,930	989,930	989,930	1,031,830
20%	989,930	989,930	989,930	989,930	1,031,830
30%	989,930	989,930	989,930	989,930	1,031,830
40%	989,930	989,930	989,930	989,930	1,031,830
50%	989,930	989,930	989,930	989,930	1,031,830
60%	989,930	989,930	989,930	989,930	1,031,830
70%	989,930	989,930	989,930	989,930	1,031,830
80%	989,930	989,930	989,930	989,930	1,031,830
90%	989,930	989,930	989,930	989,930	1,031,830
Long Term					
Full Simulation Period[b]	989,930	989,930	989,930	989,930	1,031,830
Water Year Types[c]					
Wet (32%)	989,930	989,930	989,930	989,930	1,031,830
Above Normal (16%)	989,930	989,930	989,930	989,930	1,031,830
Below Normal (13%)	989,930	989,930	989,930	989,930	1,031,830
Dry (24%)	989,930	989,930	989,930	989,930	1,031,830
Critical (15%)	989,930	989,930	989,930	989,930	1,031,830

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	989,930	989,930	989,930	989,930	1,031,830
20%	989,930	989,930	989,930	989,930	1,031,830
30%	989,930	989,930	989,930	989,930	1,031,830
40%	989,930	989,930	989,930	989,930	1,031,830
50%	989,930	989,930	989,930	989,930	1,031,830
60%	989,930	989,930	989,930	989,930	1,031,830
70%	989,930	989,930	989,930	989,930	1,031,830
80%	989,930	989,930	989,930	989,930	1,031,830
90%	989,930	989,930	989,930	989,930	1,031,830
Long Term					
Full Simulation Period[b]	989,930	989,930	989,930	989,930	1,031,830
Water Year Types[c]					
Wet (32%)	989,930	989,930	989,930	989,930	1,031,830
Above Normal (16%)	989,930	989,930	989,930	989,930	1,031,830
Below Normal (13%)	989,930	989,930	989,930	989,930	1,031,830
Dry (24%)	989,930	989,930	989,930	989,930	1,031,830
Critical (15%)	989,930	989,930	989,930	989,930	1,031,830

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-21-4. Feather River Low Flow Channel Steelhead Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	989,930	989,930	989,930	989,930	1,031,830
20%	989,930	989,930	989,930	989,930	1,031,830
30%	989,930	989,930	989,930	989,930	1,031,830
40%	989,930	989,930	989,930	989,930	1,031,830
50%	989,930	989,930	989,930	989,930	1,031,830
60%	989,930	989,930	989,930	989,930	1,031,830
70%	989,930	989,930	989,930	989,930	1,031,830
80%	989,930	989,930	989,930	989,930	1,031,830
90%	989,930	989,930	989,930	989,930	1,031,830
Long Term					
Full Simulation Period[b]	989,930	989,930	989,930	989,930	1,031,830
Water Year Types[c]					
Wet (32%)	989,930	989,930	989,930	989,930	1,031,830
Above Normal (16%)	989,930	989,930	989,930	989,930	1,031,830
Below Normal (13%)	989,930	989,930	989,930	989,930	1,031,830
Dry (24%)	989,930	989,930	989,930	989,930	1,031,830
Critical (15%)	989,930	989,930	989,930	989,930	1,031,830

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	989,930	989,930	989,930	989,930	1,031,830
20%	989,930	989,930	989,930	989,930	1,031,830
30%	989,930	989,930	989,930	989,930	1,031,830
40%	989,930	989,930	989,930	989,930	1,031,830
50%	989,930	989,930	989,930	989,930	1,031,830
60%	989,930	989,930	989,930	989,930	1,031,830
70%	989,930	989,930	989,930	989,930	1,031,830
80%	989,930	989,930	989,930	989,930	1,031,830
90%	989,930	989,930	989,930	989,930	1,031,830
Long Term					
Full Simulation Period[b]	989,930	989,930	989,930	989,930	1,031,830
Water Year Types[c]					
Wet (32%)	989,930	989,930	989,930	989,930	1,031,830
Above Normal (16%)	989,930	989,930	989,930	989,930	1,031,830
Below Normal (13%)	989,930	989,930	989,930	989,930	1,031,830
Dry (24%)	989,930	989,930	989,930	989,930	1,031,830
Critical (15%)	989,930	989,930	989,930	989,930	1,031,830

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-21-5. Feather River Low Flow Channel Steelhead Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	989,930	989,930	989,930	989,930	1,031,830
20%	989,930	989,930	989,930	989,930	1,031,830
30%	989,930	989,930	989,930	989,930	1,031,830
40%	989,930	989,930	989,930	989,930	1,031,830
50%	989,930	989,930	989,930	989,930	1,031,830
60%	989,930	989,930	989,930	989,930	1,031,830
70%	989,930	989,930	989,930	989,930	1,031,830
80%	989,930	989,930	989,930	989,930	1,031,830
90%	989,930	989,930	989,930	989,930	1,031,830
Long Term					
Full Simulation Period[b]	989,930	989,930	989,930	989,930	1,031,830
Water Year Types[c]					
Wet (32%)	989,930	989,930	989,930	989,930	1,031,830
Above Normal (16%)	989,930	989,930	989,930	989,930	1,031,830
Below Normal (13%)	989,930	989,930	989,930	989,930	1,031,830
Dry (24%)	989,930	989,930	989,930	989,930	1,031,830
Critical (15%)	989,930	989,930	989,930	989,930	1,031,830

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	989,930	989,930	989,930	989,930	1,031,830
20%	989,930	989,930	989,930	989,930	1,031,830
30%	989,930	989,930	989,930	989,930	1,031,830
40%	989,930	989,930	989,930	989,930	1,031,830
50%	989,930	989,930	989,930	989,930	1,031,830
60%	989,930	989,930	989,930	989,930	1,031,830
70%	989,930	989,930	989,930	989,930	1,031,830
80%	989,930	989,930	989,930	989,930	1,031,830
90%	989,930	989,930	989,930	989,930	1,031,830
Long Term					
Full Simulation Period[b]	989,930	989,930	989,930	989,930	1,031,830
Water Year Types[c]					
Wet (32%)	989,930	989,930	989,930	989,930	1,031,830
Above Normal (16%)	989,930	989,930	989,930	989,930	1,031,830
Below Normal (13%)	989,930	989,930	989,930	989,930	1,031,830
Dry (24%)	989,930	989,930	989,930	989,930	1,031,830
Critical (15%)	989,930	989,930	989,930	989,930	1,031,830

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-21-6. Feather River Low Flow Channel Steelhead Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	989,930	989,930	989,930	989,930	1,031,830
20%	989,930	989,930	989,930	989,930	1,031,830
30%	989,930	989,930	989,930	989,930	1,031,830
40%	989,930	989,930	989,930	989,930	1,031,830
50%	989,930	989,930	989,930	989,930	1,031,830
60%	989,930	989,930	989,930	989,930	1,031,830
70%	989,930	989,930	989,930	989,930	1,031,830
80%	989,930	989,930	989,930	989,930	1,031,830
90%	989,930	989,930	989,930	989,930	1,031,830
Long Term					
Full Simulation Period[b]	989,930	989,930	989,930	989,930	1,031,830
Water Year Types[c]					
Wet (32%)	989,930	989,930	989,930	989,930	1,031,830
Above Normal (16%)	989,930	989,930	989,930	989,930	1,031,830
Below Normal (13%)	989,930	989,930	989,930	989,930	1,031,830
Dry (24%)	989,930	989,930	989,930	989,930	1,031,830
Critical (15%)	989,930	989,930	989,930	989,930	1,031,830

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	989,930	989,930	989,930	989,930	1,031,830
20%	989,930	989,930	989,930	989,930	1,031,830
30%	989,930	989,930	989,930	989,930	1,031,830
40%	989,930	989,930	989,930	989,930	1,031,830
50%	989,930	989,930	989,930	989,930	1,031,830
60%	989,930	989,930	989,930	989,930	1,031,830
70%	989,930	989,930	989,930	989,930	1,031,830
80%	989,930	989,930	989,930	989,930	1,031,830
90%	989,930	989,930	989,930	989,930	1,031,830
Long Term					
Full Simulation Period[b]	989,930	989,930	989,930	989,930	1,031,830
Water Year Types[c]					
Wet (32%)	989,930	989,930	989,930	989,930	1,031,830
Above Normal (16%)	989,930	989,930	989,930	989,930	1,031,830
Below Normal (13%)	989,930	989,930	989,930	989,930	1,031,830
Dry (24%)	989,930	989,930	989,930	989,930	1,031,830
Critical (15%)	989,930	989,930	989,930	989,930	1,031,830

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	0
60%	0	0	0	0	0
70%	0	0	0	0	0
80%	0	0	0	0	0
90%	0	0	0	0	0
Long Term					
Full Simulation Period[b]	0	0	0	0	0
Water Year Types[c]					
Wet (32%)	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0
Dry (24%)	0	0	0	0	0
Critical (15%)	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.22. Feather River below Thermalito Steelhead Spawning WUA

Table C-22-1. Feather River Below Thermalito Steelhead Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	12,720,766	12,721,614	12,721,614	12,779,678	12,803,513
20%	11,745,270	12,526,345	11,745,270	12,663,550	12,663,550
30%	9,023,130	11,745,270	9,023,130	9,023,130	12,663,550
40%	9,023,130	9,023,130	9,023,130	9,023,130	12,663,550
50%	9,023,130	9,023,130	9,023,130	9,023,130	12,186,561
60%	9,023,130	9,023,130	9,023,130	2,838,055	8,393,389
70%	8,290,557	9,023,130	3,272,385	1,496,381	4,954,680
80%	3,348,126	7,376,589	1,243,430	1,243,430	3,384,015
90%	2,485,131	1,243,430	1,243,430	1,243,430	1,243,430
Long Term					
Full Simulation Period[b]	8,080,119	8,683,292	7,368,326	6,446,685	8,791,643
Water Year Types[c]					
Wet (32%)	7,195,939	5,088,091	2,722,063	1,636,105	4,687,997
Above Normal (16%)	7,457,219	9,151,953	7,423,853	3,543,420	9,577,740
Below Normal (13%)	7,921,910	9,535,341	9,564,818	9,047,043	11,082,428
Dry (24%)	8,704,412	10,677,103	10,202,343	10,867,037	11,180,445
Critical (15%)	9,775,191	11,861,114	10,638,263	10,263,894	10,750,046

Alternative 1

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	12,693,583	12,721,614	12,721,614	12,779,678	12,682,284
20%	10,812,258	11,745,270	11,745,270	12,663,550	12,663,550
30%	9,023,130	11,745,270	9,023,130	9,023,130	12,663,550
40%	9,023,130	9,023,130	9,023,130	9,023,130	12,663,550
50%	9,023,130	9,023,130	9,023,130	5,358,559	11,441,060
60%	9,023,130	9,023,130	6,386,814	2,234,946	8,119,357
70%	6,351,528	9,023,130	1,686,441	1,243,430	4,795,349
80%	3,557,354	4,321,929	1,243,430	1,243,430	3,301,748
90%	2,584,419	1,243,430	1,243,430	1,243,430	1,243,430
Long Term					
Full Simulation Period[b]	7,875,580	8,488,265	7,049,394	6,165,565	8,656,926
Water Year Types[c]					
Wet (32%)	6,475,224	4,660,130	2,557,186	1,540,475	4,698,637
Above Normal (16%)	7,237,916	8,821,531	6,536,707	2,312,091	8,936,674
Below Normal (13%)	9,201,788	9,606,823	8,113,263	8,711,821	10,746,662
Dry (24%)	8,682,666	10,677,103	10,207,501	10,769,606	11,471,039
Critical (15%)	9,039,653	11,748,115	11,099,196	10,353,716	10,324,375

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	-27,183	0	0	0	-121,229
20%	-933,012	-781,075	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	-3,664,571	-745,501
60%	0	0	-2,636,316	-603,110	-274,032
70%	-1,939,029	0	-1,585,943	-252,951	-159,331
80%	209,229	-3,054,660	0	0	-82,267
90%	99,288	0	0	0	0
Long Term					
Full Simulation Period[b]	-204,540	-195,027	-318,932	-281,120	-134,717
Water Year Types[c]					
Wet (32%)	-720,715	-427,961	-164,877	-95,630	10,640
Above Normal (16%)	-219,302	-330,423	-887,146	-1,231,329	-641,066
Below Normal (13%)	1,279,878	71,482	-1,451,555	-335,223	-335,766
Dry (24%)	-21,746	0	5,158	-97,431	290,595
Critical (15%)	-735,538	-113,000	460,933	89,822	-425,671

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-22-2. Feather River Below Thermalito Steelhead Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	12,720,766	12,721,614	12,721,614	12,779,678	12,803,513
20%	11,745,270	12,526,345	11,745,270	12,663,550	12,663,550
30%	9,023,130	11,745,270	9,023,130	9,023,130	12,663,550
40%	9,023,130	9,023,130	9,023,130	9,023,130	12,663,550
50%	9,023,130	9,023,130	9,023,130	9,023,130	12,186,561
60%	9,023,130	9,023,130	9,023,130	2,838,055	8,393,389
70%	8,290,557	9,023,130	3,272,385	1,496,381	4,954,680
80%	3,348,126	7,376,589	1,243,430	1,243,430	3,384,015
90%	2,485,131	1,243,430	1,243,430	1,243,430	1,243,430
Long Term					
Full Simulation Period[b]	8,080,119	8,683,292	7,368,326	6,446,685	8,791,643
Water Year Types[c]					
Wet (32%)	7,195,939	5,088,091	2,722,063	1,636,105	4,687,997
Above Normal (16%)	7,457,219	9,151,953	7,423,853	3,543,420	9,577,740
Below Normal (13%)	7,921,910	9,535,341	9,564,818	9,047,043	11,082,428
Dry (24%)	8,704,412	10,677,103	10,202,343	10,867,037	11,180,445
Critical (15%)	9,775,191	11,861,114	10,638,263	10,263,894	10,750,046

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	12,719,142	12,721,614	12,721,614	12,779,678	12,748,644
20%	11,745,270	12,526,345	11,745,270	12,663,550	12,663,550
30%	9,023,130	11,745,270	9,023,130	9,023,130	12,663,550
40%	9,023,130	9,023,130	9,023,130	9,023,130	12,663,550
50%	9,023,130	9,023,130	9,023,130	5,444,748	11,551,617
60%	9,023,130	9,023,130	7,934,121	2,534,677	8,110,754
70%	8,693,663	9,023,130	1,877,599	1,243,430	4,626,720
80%	4,254,028	8,333,530	1,243,430	1,243,430	3,285,783
90%	2,414,288	1,243,430	1,243,430	1,243,430	1,243,430
Long Term					
Full Simulation Period[b]	8,226,149	8,652,317	7,099,831	6,225,156	8,597,852
Water Year Types[c]					
Wet (32%)	6,429,745	5,049,478	2,786,381	1,540,145	4,696,149
Above Normal (16%)	7,576,597	9,101,209	6,744,972	2,502,286	8,934,733
Below Normal (13%)	9,120,473	9,472,604	8,192,332	8,711,680	10,528,263
Dry (24%)	9,173,842	10,667,791	10,202,404	10,878,178	11,196,576
Critical (15%)	10,422,755	11,861,114	10,657,654	10,374,774	10,585,839

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	-1,624	0	0	0	-54,869
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	-3,578,382	-634,944
60%	0	0	-1,089,009	-303,379	-282,635
70%	403,106	0	-1,394,786	-252,951	-327,960
80%	905,902	956,941	0	0	-98,232
90%	-70,843	0	0	0	0
Long Term					
Full Simulation Period[b]	146,030	-30,975	-268,495	-221,528	-193,790
Water Year Types[c]					
Wet (32%)	-766,194	-38,613	64,319	-95,960	8,152
Above Normal (16%)	119,379	-50,744	-678,881	-1,041,134	-643,008
Below Normal (13%)	1,198,564	-62,737	-1,372,486	-335,363	-554,165
Dry (24%)	469,430	-9,312	61	11,141	16,132
Critical (15%)	647,564	0	19,391	110,880	-164,207

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-22-3. Feather River Below Thermalito Steelhead Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	12,720,766	12,721,614	12,721,614	12,779,678	12,803,513
20%	11,745,270	12,526,345	11,745,270	12,663,550	12,663,550
30%	9,023,130	11,745,270	9,023,130	9,023,130	12,663,550
40%	9,023,130	9,023,130	9,023,130	9,023,130	12,663,550
50%	9,023,130	9,023,130	9,023,130	9,023,130	12,186,561
60%	9,023,130	9,023,130	9,023,130	2,838,055	8,393,389
70%	8,290,557	9,023,130	3,272,385	1,496,381	4,954,680
80%	3,348,126	7,376,589	1,243,430	1,243,430	3,384,015
90%	2,485,131	1,243,430	1,243,430	1,243,430	1,243,430
Long Term					
Full Simulation Period[b]	8,080,119	8,683,292	7,368,326	6,446,685	8,791,643
Water Year Types[c]					
Wet (32%)	7,195,939	5,088,091	2,722,063	1,636,105	4,687,997
Above Normal (16%)	7,457,219	9,151,953	7,423,853	3,543,420	9,577,740
Below Normal (13%)	7,921,910	9,535,341	9,564,818	9,047,043	11,082,428
Dry (24%)	8,704,412	10,677,103	10,202,343	10,867,037	11,180,445
Critical (15%)	9,775,191	11,861,114	10,638,263	10,263,894	10,750,046

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	12,720,769	12,721,614	12,721,614	12,779,678	12,808,150
20%	11,745,270	12,526,345	11,745,270	12,663,550	12,663,550
30%	9,023,130	11,745,270	9,023,130	9,023,130	12,663,550
40%	9,023,130	9,023,130	9,023,130	9,023,130	12,663,550
50%	9,023,130	9,023,130	9,023,130	9,023,130	12,377,121
60%	9,023,130	9,023,130	9,023,130	2,836,521	8,397,087
70%	8,257,271	9,023,130	3,247,076	1,776,306	5,245,762
80%	3,353,537	7,359,046	1,243,430	1,243,430	3,383,285
90%	2,477,496	1,243,430	1,243,430	1,243,430	1,243,430
Long Term					
Full Simulation Period[b]	8,071,006	8,663,984	7,392,916	6,450,056	8,847,069
Water Year Types[c]					
Wet (32%)	7,206,473	5,027,012	2,721,565	1,635,752	4,686,956
Above Normal (16%)	7,458,894	9,152,014	7,588,980	3,593,140	9,581,406
Below Normal (13%)	7,922,494	9,535,703	9,564,818	9,043,537	11,083,289
Dry (24%)	8,685,408	10,677,103	10,202,389	10,867,086	11,242,206
Critical (15%)	9,719,413	11,861,114	10,628,407	10,236,963	11,023,351

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	3	0	0	0	4,637
20%	0	0	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	0	190,560
60%	0	0	0	-1,535	3,698
70%	-33,287	0	-25,309	279,924	291,082
80%	5,412	-17,543	0	0	-730
90%	-7,636	0	0	0	0
Long Term					
Full Simulation Period[b]	-9,114	-19,308	24,590	3,371	55,426
Water Year Types[c]					
Wet (32%)	10,534	-61,079	-498	-353	-1,042
Above Normal (16%)	1,675	61	165,127	49,720	3,666
Below Normal (13%)	584	362	0	-3,507	861
Dry (24%)	-19,004	0	46	49	61,762
Critical (15%)	-55,778	0	-9,856	-26,931	273,305

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-22-4. Feather River Below Thermalito Steelhead Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	12,693,583	12,721,614	12,721,614	12,779,678	12,682,284
20%	10,812,258	11,745,270	11,745,270	12,663,550	12,663,550
30%	9,023,130	11,745,270	9,023,130	9,023,130	12,663,550
40%	9,023,130	9,023,130	9,023,130	9,023,130	12,663,550
50%	9,023,130	9,023,130	9,023,130	5,358,559	11,441,060
60%	9,023,130	9,023,130	6,386,814	2,234,946	8,119,357
70%	6,351,528	9,023,130	1,686,441	1,243,430	4,795,349
80%	3,557,354	4,321,929	1,243,430	1,243,430	3,301,748
90%	2,584,419	1,243,430	1,243,430	1,243,430	1,243,430
Long Term					
Full Simulation Period[b]	7,875,580	8,488,265	7,049,394	6,165,565	8,656,926
Water Year Types[c]					
Wet (32%)	6,475,224	4,660,130	2,557,186	1,540,475	4,698,637
Above Normal (16%)	7,237,916	8,821,531	6,536,707	2,312,091	8,936,674
Below Normal (13%)	9,201,788	9,606,823	8,113,263	8,711,821	10,746,662
Dry (24%)	8,682,666	10,677,103	10,207,501	10,769,606	11,471,039
Critical (15%)	9,039,653	11,748,115	11,099,196	10,353,716	10,324,375

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	12,720,766	12,721,614	12,721,614	12,779,678	12,803,513
20%	11,745,270	12,526,345	11,745,270	12,663,550	12,663,550
30%	9,023,130	11,745,270	9,023,130	9,023,130	12,663,550
40%	9,023,130	9,023,130	9,023,130	9,023,130	12,663,550
50%	9,023,130	9,023,130	9,023,130	9,023,130	12,186,561
60%	9,023,130	9,023,130	9,023,130	2,838,055	8,393,389
70%	8,290,557	9,023,130	3,272,385	1,496,381	4,954,680
80%	3,348,126	7,376,589	1,243,430	1,243,430	3,384,015
90%	2,485,131	1,243,430	1,243,430	1,243,430	1,243,430
Long Term					
Full Simulation Period[b]	8,080,119	8,683,292	7,368,326	6,446,685	8,791,643
Water Year Types[c]					
Wet (32%)	7,195,939	5,088,091	2,722,063	1,636,105	4,687,997
Above Normal (16%)	7,457,219	9,151,953	7,423,853	3,543,420	9,577,740
Below Normal (13%)	7,921,910	9,535,341	9,564,818	9,047,043	11,082,428
Dry (24%)	8,704,412	10,677,103	10,202,343	10,867,037	11,180,445
Critical (15%)	9,775,191	11,861,114	10,638,263	10,263,894	10,750,046

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	27,183	0	0	0	121,229
20%	933,012	781,075	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	3,664,571	745,501
60%	0	0	2,636,316	603,110	274,032
70%	1,939,029	0	1,585,943	252,951	159,331
80%	**-209,229**	3,054,660	0	0	82,267
90%	**-99,288**	0	0	0	0
Long Term					
Full Simulation Period[b]	204,540	195,027	318,932	281,120	134,717
Water Year Types[c]					
Wet (32%)	720,715	427,961	164,877	95,630	**-10,640**
Above Normal (16%)	219,302	330,423	887,146	1,231,329	641,066
Below Normal (13%)	**-1,279,878**	**-71,482**	1,451,555	335,223	335,766
Dry (24%)	21,746	0	**-5,158**	97,431	**-290,595**
Critical (15%)	735,538	113,000	**-460,933**	**-89,822**	425,671

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-22-5. Feather River Below Thermalito Steelhead Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	12,693,583	12,721,614	12,721,614	12,779,678	12,682,284
20%	10,812,258	11,745,270	11,745,270	12,663,550	12,663,550
30%	9,023,130	11,745,270	9,023,130	9,023,130	12,663,550
40%	9,023,130	9,023,130	9,023,130	9,023,130	12,663,550
50%	9,023,130	9,023,130	9,023,130	5,358,559	11,441,060
60%	9,023,130	9,023,130	6,386,814	2,234,946	8,119,357
70%	6,351,528	9,023,130	1,686,441	1,243,430	4,795,349
80%	3,557,354	4,321,929	1,243,430	1,243,430	3,301,748
90%	2,584,419	1,243,430	1,243,430	1,243,430	1,243,430
Long Term					
Full Simulation Period[b]	7,875,580	8,488,265	7,049,394	6,165,565	8,656,926
Water Year Types[c]					
Wet (32%)	6,475,224	4,660,130	2,557,186	1,540,475	4,698,637
Above Normal (16%)	7,237,916	8,821,531	6,536,707	2,312,091	8,936,674
Below Normal (13%)	9,201,788	9,606,823	8,113,263	8,711,821	10,746,662
Dry (24%)	8,682,666	10,677,103	10,207,501	10,769,606	11,471,039
Critical (15%)	9,039,653	11,748,115	11,099,196	10,353,716	10,324,375

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	12,719,142	12,721,614	12,721,614	12,779,678	12,748,644
20%	11,745,270	12,526,345	11,745,270	12,663,550	12,663,550
30%	9,023,130	11,745,270	9,023,130	9,023,130	12,663,550
40%	9,023,130	9,023,130	9,023,130	9,023,130	12,663,550
50%	9,023,130	9,023,130	9,023,130	5,444,748	11,551,617
60%	9,023,130	9,023,130	7,934,121	2,534,677	8,110,754
70%	8,693,663	9,023,130	1,877,599	1,243,430	4,626,720
80%	4,254,028	8,333,530	1,243,430	1,243,430	3,285,783
90%	2,414,288	1,243,430	1,243,430	1,243,430	1,243,430
Long Term					
Full Simulation Period[b]	8,226,149	8,652,317	7,099,831	6,225,156	8,597,852
Water Year Types[c]					
Wet (32%)	6,429,745	5,049,478	2,786,381	1,540,145	4,696,149
Above Normal (16%)	7,576,597	9,101,209	6,744,972	2,502,286	8,934,733
Below Normal (13%)	9,120,473	9,472,604	8,192,332	8,711,680	10,528,263
Dry (24%)	9,173,842	10,667,791	10,202,404	10,878,178	11,196,576
Critical (15%)	10,422,755	11,861,114	10,657,654	10,374,774	10,585,839

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	25,559	0	0	0	66,361
20%	933,012	781,075	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	86,189	110,557
60%	0	0	1,547,307	299,731	-8,604
70%	2,342,135	0	191,158	0	-168,629
80%	696,673	4,011,601	0	0	-15,965
90%	-170,131	0	0	0	0
Long Term					
Full Simulation Period[b]	350,570	164,051	50,437	59,592	-59,073
Water Year Types[c]					
Wet (32%)	-45,479	389,348	229,196	-330	-2,488
Above Normal (16%)	338,681	279,679	208,265	190,194	-1,942
Below Normal (13%)	-81,314	-134,219	79,069	-141	-218,399
Dry (24%)	491,176	-9,312	-5,098	108,573	-274,463
Critical (15%)	1,383,102	113,000	-441,542	21,057	261,464

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-22-6. Feather River Below Thermalito Steelhead Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	12,693,583	12,721,614	12,721,614	12,779,678	12,682,284
20%	10,812,258	11,745,270	11,745,270	12,663,550	12,663,550
30%	9,023,130	11,745,270	9,023,130	9,023,130	12,663,550
40%	9,023,130	9,023,130	9,023,130	9,023,130	12,663,550
50%	9,023,130	9,023,130	9,023,130	5,358,559	11,441,060
60%	9,023,130	9,023,130	6,386,814	2,234,946	8,119,357
70%	6,351,528	9,023,130	1,686,441	1,243,430	4,795,349
80%	3,557,354	4,321,929	1,243,430	1,243,430	3,301,748
90%	2,584,419	1,243,430	1,243,430	1,243,430	1,243,430
Long Term					
Full Simulation Period[b]	7,875,580	8,488,265	7,049,394	6,165,565	8,656,926
Water Year Types[c]					
Wet (32%)	6,475,224	4,660,130	2,557,186	1,540,475	4,698,637
Above Normal (16%)	7,237,916	8,821,531	6,536,707	2,312,091	8,936,674
Below Normal (13%)	9,201,788	9,606,823	8,113,263	8,711,821	10,746,662
Dry (24%)	8,682,666	10,677,103	10,207,501	10,769,606	11,471,039
Critical (15%)	9,039,653	11,748,115	11,099,196	10,353,716	10,324,375

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	12,720,769	12,721,614	12,721,614	12,779,678	12,808,150
20%	11,745,270	12,526,345	11,745,270	12,663,550	12,663,550
30%	9,023,130	11,745,270	9,023,130	9,023,130	12,663,550
40%	9,023,130	9,023,130	9,023,130	9,023,130	12,663,550
50%	9,023,130	9,023,130	9,023,130	9,023,130	12,377,121
60%	9,023,130	9,023,130	9,023,130	2,836,521	8,397,087
70%	8,257,271	9,023,130	3,247,076	1,776,306	5,245,762
80%	3,353,537	7,359,046	1,243,430	1,243,430	3,383,285
90%	2,477,496	1,243,430	1,243,430	1,243,430	1,243,430
Long Term					
Full Simulation Period[b]	8,071,006	8,663,984	7,392,916	6,450,056	8,847,069
Water Year Types[c]					
Wet (32%)	7,206,473	5,027,012	2,721,565	1,635,752	4,686,956
Above Normal (16%)	7,458,894	9,152,014	7,588,980	3,593,140	9,581,406
Below Normal (13%)	7,922,494	9,535,703	9,564,818	9,043,537	11,083,289
Dry (24%)	8,685,408	10,677,103	10,202,389	10,867,086	11,242,206
Critical (15%)	9,719,413	11,861,114	10,628,407	10,236,963	11,023,351

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	27,186	0	0	0	125,867
20%	933,012	781,075	0	0	0
30%	0	0	0	0	0
40%	0	0	0	0	0
50%	0	0	0	3,664,571	936,061
60%	0	0	2,636,316	601,575	277,730
70%	1,905,743	0	1,560,634	532,876	450,413
80%	-203,817	3,037,118	0	0	81,537
90%	-106,923	0	0	0	0
Long Term					
Full Simulation Period[b]	195,426	175,718	343,522	284,491	190,143
Water Year Types[c]					
Wet (32%)	731,249	366,882	164,379	95,277	-11,681
Above Normal (16%)	220,977	330,484	1,052,273	1,281,049	644,732
Below Normal (13%)	-1,279,294	-71,120	1,451,555	331,716	336,627
Dry (24%)	2,742	0	-5,112	97,480	-228,833
Critical (15%)	679,761	113,000	-470,789	-116,753	698,976

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.23. Feather River Low Flow Channel Fall-run Spawning WUA

Table C-23-1. Feather River Low Flow Channel Fall-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
20%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
30%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
40%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
50%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
60%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
70%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
80%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
90%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Long Term							
Full Simulation Period[b]	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Water Year Types[c]							
Wet (32%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Above Normal (16%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Below Normal (13%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Dry (24%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Critical (15%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140

Alternative 1

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
20%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
30%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
40%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
50%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
60%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
70%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
80%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
90%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Long Term							
Full Simulation Period[b]	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Water Year Types[c]							
Wet (32%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Above Normal (16%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Below Normal (13%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Dry (24%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Critical (15%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0
Long Term							
Full Simulation Period[b]	0	0	0	0	0	0	0
Water Year Types[c]							
Wet (32%)	0	0	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0	0
Dry (24%)	0	0	0	0	0	0	0
Critical (15%)	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-23-2. Feather River Low Flow Channel Fall-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
20%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
30%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
40%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
50%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
60%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
70%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
80%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
90%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Long Term							
Full Simulation Period[b]	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Water Year Types[c]							
Wet (32%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Above Normal (16%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Below Normal (13%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Dry (24%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Critical (15%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140

Alternative 3

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
20%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
30%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
40%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
50%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
60%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
70%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
80%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
90%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Long Term							
Full Simulation Period[b]	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Water Year Types[c]							
Wet (32%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Above Normal (16%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Below Normal (13%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Dry (24%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Critical (15%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0
Long Term							
Full Simulation Period[b]	0	0	0	0	0	0	0
Water Year Types[c]							
Wet (32%)	0	0	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0	0
Dry (24%)	0	0	0	0	0	0	0
Critical (15%)	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-23-3. Feather River Low Flow Channel Fall-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
20%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
30%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
40%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
50%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
60%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
70%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
80%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
90%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Long Term							
Full Simulation Period[b]	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Water Year Types[c]							
Wet (32%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Above Normal (16%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Below Normal (13%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Dry (24%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Critical (15%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140

Alternative 5

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
20%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
30%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
40%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
50%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
60%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
70%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
80%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
90%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Long Term							
Full Simulation Period[b]	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Water Year Types[c]							
Wet (32%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Above Normal (16%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Below Normal (13%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Dry (24%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Critical (15%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0
Long Term							
Full Simulation Period[b]	0	0	0	0	0	0	0
Water Year Types[c]							
Wet (32%)	0	0	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0	0
Dry (24%)	0	0	0	0	0	0	0
Critical (15%)	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-23-4. Feather River Low Flow Channel Fall-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
20%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
30%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
40%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
50%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
60%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
70%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
80%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
90%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Long Term							
Full Simulation Period[b]	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Water Year Types[c]							
Wet (32%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Above Normal (16%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Below Normal (13%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Dry (24%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Critical (15%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140

No Action Alternative

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
20%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
30%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
40%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
50%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
60%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
70%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
80%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
90%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Long Term							
Full Simulation Period[b]	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Water Year Types[c]							
Wet (32%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Above Normal (16%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Below Normal (13%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Dry (24%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Critical (15%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0
Long Term							
Full Simulation Period[b]	0	0	0	0	0	0	0
Water Year Types[c]							
Wet (32%)	0	0	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0	0
Dry (24%)	0	0	0	0	0	0	0
Critical (15%)	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-23-5. Feather River Low Flow Channel Fall-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
20%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
30%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
40%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
50%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
60%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
70%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
80%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
90%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Long Term							
Full Simulation Period[b]	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Water Year Types[c]							
Wet (32%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Above Normal (16%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Below Normal (13%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Dry (24%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Critical (15%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140

Alternative 3

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
20%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
30%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
40%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
50%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
60%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
70%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
80%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
90%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Long Term							
Full Simulation Period[b]	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Water Year Types[c]							
Wet (32%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Above Normal (16%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Below Normal (13%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Dry (24%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Critical (15%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0
Long Term							
Full Simulation Period[b]	0	0	0	0	0	0	0
Water Year Types[c]							
Wet (32%)	0	0	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0	0
Dry (24%)	0	0	0	0	0	0	0
Critical (15%)	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-23-6. Feather River Low Flow Channel Fall-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
20%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
30%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
40%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
50%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
60%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
70%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
80%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
90%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Long Term							
Full Simulation Period[b]	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Water Year Types[c]							
Wet (32%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Above Normal (16%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Below Normal (13%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Dry (24%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Critical (15%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140

Alternative 5

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
20%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
30%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
40%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
50%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
60%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
70%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
80%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
90%	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Long Term							
Full Simulation Period[b]	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Water Year Types[c]							
Wet (32%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Above Normal (16%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Below Normal (13%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Dry (24%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140
Critical (15%)	24,623,964	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140	24,736,140

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0
Long Term							
Full Simulation Period[b]	0	0	0	0	0	0	0
Water Year Types[c]							
Wet (32%)	0	0	0	0	0	0	0
Above Normal (16%)	0	0	0	0	0	0	0
Below Normal (13%)	0	0	0	0	0	0	0
Dry (24%)	0	0	0	0	0	0	0
Critical (15%)	0	0	0	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.24. Feather River below Thermalito Fall-run Spawning WUA

Table C-24-1. Feather River Below Thermalito Fall-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	33,333,011	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
20%	31,341,881	34,796,595	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
30%	30,204,290	32,691,770	33,836,271	35,198,088	35,198,088	35,198,088	30,531,317
40%	21,675,598	30,248,751	32,691,770	35,109,485	35,198,088	32,691,770	27,907,015
50%	13,576,541	28,651,642	30,408,820	32,837,847	32,691,770	28,651,642	27,098,994
60%	10,224,170	19,214,760	30,408,820	32,231,619	30,267,693	28,651,642	16,558,498
70%	10,224,170	19,214,760	30,408,820	28,651,642	28,651,642	20,558,706	11,222,561
80%	10,224,170	19,214,760	28,910,482	21,186,712	28,651,642	10,224,170	10,224,170
90%	10,224,170	19,214,760	28,651,642	14,768,679	10,224,170	10,224,170	10,224,170
Long Term							
Full Simulation Period[b]	19,493,864	26,772,026	31,264,010	29,332,133	29,033,129	25,980,815	22,918,722
Water Year Types[c]							
Wet (32%)	11,062,074	26,281,951	30,818,674	29,293,814	22,111,836	15,211,071	11,943,327
Above Normal (16%)	10,224,170	28,726,415	31,820,384	27,290,181	30,975,948	26,807,422	18,238,581
Below Normal (13%)	23,523,311	24,198,199	31,762,781	29,604,012	34,493,702	34,365,349	31,966,805
Dry (24%)	26,889,930	25,357,801	31,261,534	30,018,605	32,732,891	32,309,264	31,860,294
Critical (15%)	31,784,477	30,432,982	31,173,088	30,233,929	30,752,748	30,186,534	28,572,199

Alternative 1

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	33,706,952	34,938,319	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
20%	32,430,525	33,448,191	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
30%	30,802,749	30,707,394	35,198,088	35,198,088	35,198,088	34,871,693	30,204,290
40%	30,204,290	28,651,642	34,431,241	35,196,517	35,198,088	32,691,770	27,098,994
50%	28,046,601	22,379,746	32,691,770	32,847,639	32,691,770	28,651,642	27,098,994
60%	20,241,358	19,345,841	30,447,453	29,997,845	29,180,786	27,840,395	13,899,774
70%	16,962,984	19,214,760	30,408,820	28,651,642	28,651,642	11,990,462	10,224,170
80%	14,685,529	19,214,760	30,408,820	22,517,048	25,686,778	10,224,170	10,224,170
90%	13,743,977	19,214,760	28,651,642	15,221,904	10,224,170	10,224,170	10,224,170
Long Term							
Full Simulation Period[b]	24,392,133	25,520,412	32,031,555	29,332,859	28,591,614	24,627,737	22,139,012
Water Year Types[c]							
Wet (32%)	23,110,223	25,465,715	31,806,280	26,883,379	20,884,575	14,520,956	11,573,794
Above Normal (16%)	17,898,191	27,096,493	32,757,766	27,492,250	30,383,035	23,248,973	14,277,054
Below Normal (13%)	23,677,135	22,580,278	32,461,765	33,633,302	34,375,109	29,963,337	31,465,154
Dry (24%)	26,681,930	25,839,785	31,800,234	30,689,805	32,732,891	32,353,485	32,137,042
Critical (15%)	31,043,793	26,094,337	31,724,101	30,430,409	31,145,831	30,252,214	28,335,089

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	373,941	**-259,769**	0	0	0	0	0
20%	1,088,644	**-1,348,404**	0	0	0	0	0
30%	598,459	**-1,984,376**	1,361,817	0	0	**-326,395**	**-327,027**
40%	8,528,692	**-1,597,109**	1,739,471	87,032	0	0	**-808,021**
50%	14,470,061	**-6,271,896**	2,282,950	9,792	0	0	0
60%	10,017,188	131,081	38,633	**-2,233,774**	**-1,086,907**	**-811,247**	**-2,658,724**
70%	6,738,814	0	0	0	0	**-8,568,244**	**-998,391**
80%	4,461,359	0	1,498,338	1,330,336	**-2,964,864**	0	0
90%	3,519,807	0	0	453,224	0	0	0
Long Term							
Full Simulation Period[b]	4,898,268	**-1,251,613**	767,545	726	**-441,515**	**-1,353,078**	**-779,710**
Water Year Types[c]							
Wet (32%)	12,048,149	**-816,235**	987,606	**-2,410,435**	**-1,227,262**	**-690,115**	**-369,533**
Above Normal (16%)	7,674,021	**-1,629,922**	937,382	202,069	**-592,912**	**-3,558,449**	**-3,961,527**
Below Normal (13%)	153,824	**-1,617,921**	698,984	4,029,289	**-118,592**	**-4,402,013**	**-501,652**
Dry (24%)	**-208,001**	481,984	538,699	671,200	0	44,221	276,748
Critical (15%)	**-740,684**	**-4,338,645**	551,014	196,480	393,082	65,680	**-237,110**

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-24-2. Feather River Below Thermalito Fall-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	33,333,011	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
20%	31,341,881	34,796,595	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
30%	30,204,290	32,691,770	33,836,271	35,198,088	35,198,088	35,198,088	30,531,317
40%	21,675,598	30,248,751	32,691,770	35,109,485	35,198,088	32,691,770	27,907,015
50%	13,576,541	28,651,642	30,408,820	32,837,847	32,691,770	28,651,642	27,098,994
60%	10,224,170	19,214,760	30,408,820	32,231,619	30,267,693	28,651,642	16,558,498
70%	10,224,170	19,214,760	30,408,820	28,651,642	28,651,642	20,558,706	11,222,561
80%	10,224,170	19,214,760	28,910,482	21,186,712	28,651,642	10,224,170	10,224,170
90%	10,224,170	19,214,760	28,651,642	14,768,679	10,224,170	10,224,170	10,224,170
Long Term							
Full Simulation Period[b]	19,493,864	26,772,026	31,264,010	29,332,133	29,033,129	25,980,815	22,918,722
Water Year Types[c]							
Wet (32%)	11,062,074	26,281,951	30,818,674	29,293,814	22,111,836	15,211,071	11,943,327
Above Normal (16%)	10,224,170	28,726,415	31,820,384	27,290,181	30,975,948	26,807,422	18,238,581
Below Normal (13%)	23,523,311	24,198,199	31,762,781	29,604,012	34,493,702	34,365,349	31,966,805
Dry (24%)	26,889,930	25,357,801	31,261,534	30,018,605	32,732,891	32,309,264	31,860,294
Critical (15%)	31,784,477	30,432,982	31,173,088	30,233,929	30,752,748	30,186,534	28,572,199

Alternative 3

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	33,777,304	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
20%	32,485,908	35,110,630	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
30%	30,815,896	32,779,690	35,198,088	35,198,088	35,198,088	35,198,088	30,204,290
40%	30,204,290	31,083,556	34,007,312	35,198,088	35,198,088	32,691,770	27,098,994
50%	29,870,769	28,651,642	32,691,770	33,312,011	32,691,770	28,651,642	27,098,994
60%	26,684,954	22,345,634	30,408,820	32,691,770	30,267,693	28,651,642	15,022,238
70%	20,325,531	19,214,760	30,408,820	28,651,642	28,651,642	12,690,134	10,224,170
80%	15,989,853	19,214,760	28,706,794	25,706,241	28,651,642	10,224,170	10,224,170
90%	14,282,070	19,214,760	28,651,642	14,626,163	10,224,170	10,224,170	10,224,170
Long Term							
Full Simulation Period[b]	25,697,720	27,238,854	31,755,575	29,653,744	28,860,880	25,189,774	22,174,847
Water Year Types[c]							
Wet (32%)	25,123,354	26,579,504	31,294,094	26,714,836	21,582,367	15,207,515	11,573,668
Above Normal (16%)	18,163,474	28,551,699	32,389,360	27,961,666	30,966,711	25,642,082	15,051,212
Below Normal (13%)	25,953,862	25,518,911	32,624,077	33,279,166	34,475,983	29,834,397	31,464,643
Dry (24%)	27,532,535	27,944,987	31,911,673	31,764,503	32,730,727	32,309,964	31,769,600
Critical (15%)	31,811,457	27,644,926	31,012,559	31,013,227	30,752,748	30,203,445	28,354,439

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	444,294	0	0	0	0	0	0
20%	1,144,027	314,035	0	0	0	0	0
30%	611,606	87,920	1,361,817	0	0	0	-327,027
40%	8,528,692	834,805	1,315,542	88,603	0	0	-808,021
50%	16,294,229	0	2,282,950	474,164	0	0	0
60%	16,460,784	3,130,874	0	460,151	0	0	-1,536,260
70%	10,101,361	0	0	0	0	-7,868,573	-998,391
80%	5,765,683	0	-203,688	4,519,529	0	0	0
90%	4,057,900	0	0	-142,517	0	0	0
Long Term							
Full Simulation Period[b]	6,203,855	466,829	491,564	321,611	-172,249	-791,042	-743,875
Water Year Types[c]							
Wet (32%)	14,061,280	297,553	475,420	-2,578,978	-529,469	-3,556	-369,659
Above Normal (16%)	7,939,304	-174,717	568,976	671,484	-9,237	-1,165,339	-3,187,369
Below Normal (13%)	2,430,551	1,320,712	861,296	3,675,154	-17,719	-4,530,952	-502,162
Dry (24%)	642,604	2,587,186	650,139	1,745,897	-2,164	700	-90,694
Critical (15%)	26,980	-2,788,056	-160,529	779,298	0	16,910	-217,760

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-24-3. Feather River Below Thermalito Fall-run Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	33,333,011	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
20%	31,341,881	34,796,595	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
30%	30,204,290	32,691,770	33,836,271	35,198,088	35,198,088	35,198,088	30,531,317
40%	21,675,598	30,248,751	32,691,770	35,109,485	35,198,088	32,691,770	27,907,015
50%	13,576,541	28,651,642	30,408,820	32,837,847	32,691,770	28,651,642	27,098,994
60%	10,224,170	19,214,760	30,408,820	32,231,619	30,267,693	28,651,642	16,558,498
70%	10,224,170	19,214,760	30,408,820	28,651,642	28,651,642	20,558,706	11,222,561
80%	10,224,170	19,214,760	28,910,482	21,186,712	28,651,642	10,224,170	10,224,170
90%	10,224,170	19,214,760	28,651,642	14,768,679	10,224,170	10,224,170	10,224,170
Long Term							
Full Simulation Period[b]	19,493,864	26,772,026	31,264,010	29,332,133	29,033,129	25,980,815	22,918,722
Water Year Types[c]							
Wet (32%)	11,062,074	26,281,951	30,818,674	29,293,814	22,111,836	15,211,071	11,943,327
Above Normal (16%)	10,224,170	28,726,415	31,820,384	27,290,181	30,975,948	26,807,422	18,238,581
Below Normal (13%)	23,523,311	24,198,199	31,762,781	29,604,012	34,493,702	34,365,349	31,966,805
Dry (24%)	26,889,930	25,357,801	31,261,534	30,018,605	32,732,891	32,309,264	31,860,294
Critical (15%)	31,784,477	30,432,982	31,173,088	30,233,929	30,752,748	30,186,534	28,572,199

Alternative 5

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	33,865,465	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
20%	31,372,250	34,798,753	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
30%	30,204,290	32,691,770	33,939,911	35,198,088	35,198,088	35,198,088	30,533,003
40%	24,815,466	30,440,840	32,691,770	35,087,554	35,198,088	32,778,926	27,597,049
50%	13,460,109	28,651,642	30,408,820	32,837,442	32,691,770	30,671,706	27,098,994
60%	10,224,170	19,214,760	30,408,820	32,401,804	30,267,693	28,651,642	16,549,156
70%	10,224,170	19,214,760	30,408,820	28,651,642	28,651,642	20,368,760	12,334,457
80%	10,224,170	19,214,760	29,386,480	21,227,294	28,651,642	10,224,170	10,224,170
90%	10,224,170	19,214,760	28,651,642	14,734,634	10,224,170	10,224,170	10,224,170
Long Term							
Full Simulation Period[b]	19,547,683	26,775,449	31,310,168	29,317,610	28,943,166	26,104,257	22,938,320
Water Year Types[c]							
Wet (32%)	11,076,085	26,159,579	30,814,718	29,324,948	21,828,184	15,211,109	11,941,464
Above Normal (16%)	10,224,170	28,750,622	32,185,751	27,296,663	30,976,207	27,656,337	18,474,607
Below Normal (13%)	23,225,254	24,198,277	31,762,781	29,607,819	34,493,209	34,365,349	31,955,180
Dry (24%)	27,221,390	25,486,065	31,223,266	29,970,496	32,732,891	32,309,793	31,857,927
Critical (15%)	31,842,668	30,481,444	31,165,034	30,136,903	30,752,748	30,109,432	28,469,065

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	532,454	0	0	0	0	0	0
20%	30,369	2,158	0	0	0	0	0
30%	0	0	103,640	0	0	0	1,686
40%	3,139,868	192,089	0	-21,930	0	87,156	-309,966
50%	-116,432	0	0	-405	0	2,020,064	0
60%	0	0	0	170,185	0	0	-9,342
70%	0	0	0	0	0	-189,946	1,111,896
80%	0	0	475,999	40,582	0	0	0
90%	0	0	0	-34,046	0	0	0
Long Term							
Full Simulation Period[b]	53,819	3,423	46,157	-14,523	-89,963	123,442	19,598
Water Year Types[c]							
Wet (32%)	14,011	-122,372	-3,956	31,134	-283,652	38	-1,863
Above Normal (16%)	0	24,207	365,367	6,482	259	848,915	236,026
Below Normal (13%)	-298,057	78	0	3,806	-493	0	-11,626
Dry (24%)	331,460	128,264	-38,268	-48,110	0	529	-2,368
Critical (15%)	58,191	48,462	-8,054	-97,026	0	-77,103	-103,134

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-24-4. Feather River Below Thermalito Fall-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	33,706,952	34,938,319	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
20%	32,430,525	33,448,191	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
30%	30,802,749	30,707,394	35,198,088	35,198,088	35,198,088	34,871,693	30,204,290
40%	30,204,290	28,651,642	34,431,241	35,196,517	35,198,088	32,691,770	27,098,994
50%	28,046,601	22,379,746	32,691,770	32,847,639	32,691,770	28,651,642	27,098,994
60%	20,241,358	19,345,841	30,447,453	29,997,845	29,180,786	27,840,395	13,899,774
70%	16,962,984	19,214,760	30,408,820	28,651,642	28,651,642	11,990,462	10,224,170
80%	14,685,529	19,214,760	30,408,820	22,517,048	25,686,778	10,224,170	10,224,170
90%	13,743,977	19,214,760	28,651,642	15,221,904	10,224,170	10,224,170	10,224,170
Long Term							
Full Simulation Period[b]	24,392,133	25,520,412	32,031,555	29,332,859	28,591,614	24,627,737	22,139,012
Water Year Types[c]							
Wet (32%)	23,110,223	25,465,715	31,806,280	26,883,379	20,884,575	14,520,956	11,573,794
Above Normal (16%)	17,898,191	27,096,493	32,757,766	27,492,250	30,383,035	23,248,973	14,277,054
Below Normal (13%)	23,677,135	22,580,278	32,461,765	33,633,302	34,375,109	29,963,337	31,465,154
Dry (24%)	26,681,930	25,839,785	31,800,234	30,689,805	32,732,891	32,353,485	32,137,042
Critical (15%)	31,043,793	26,094,337	31,724,101	30,430,409	31,145,831	30,252,214	28,335,089

No Action Alternative

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	33,333,011	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
20%	31,341,881	34,796,595	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
30%	30,204,290	32,691,770	33,836,271	35,198,088	35,198,088	35,198,088	30,531,317
40%	21,675,598	30,248,751	32,691,770	35,109,485	35,198,088	32,691,770	27,907,015
50%	13,576,541	28,651,642	30,408,820	32,837,847	32,691,770	28,651,642	27,098,994
60%	10,224,170	19,214,760	30,408,820	32,231,619	30,267,693	28,651,642	16,558,498
70%	10,224,170	19,214,760	30,408,820	28,651,642	28,651,642	20,558,706	11,222,561
80%	10,224,170	19,214,760	28,910,482	21,186,712	28,651,642	10,224,170	10,224,170
90%	10,224,170	19,214,760	28,651,642	14,768,679	10,224,170	10,224,170	10,224,170
Long Term							
Full Simulation Period[b]	19,493,864	26,772,026	31,264,010	29,332,133	29,033,129	25,980,815	22,918,722
Water Year Types[c]							
Wet (32%)	11,062,074	26,281,951	30,818,674	29,293,814	22,111,836	15,211,071	11,943,327
Above Normal (16%)	10,224,170	28,726,415	31,820,384	27,290,181	30,975,948	26,807,422	18,238,581
Below Normal (13%)	23,523,311	24,198,199	31,762,781	29,604,012	34,493,702	34,365,349	31,966,805
Dry (24%)	26,889,930	25,357,801	31,261,534	30,018,605	32,732,891	32,309,264	31,860,294
Critical (15%)	31,784,477	30,432,982	31,173,088	30,233,929	30,752,748	30,186,534	28,572,199

No Action Alternative minus Second Basis of Comparison

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	-373,941	259,769	0	0	0	0	0
20%	-1,088,644	1,348,404	0	0	0	0	0
30%	-598,459	1,984,376	-1,361,817	0	0	326,395	327,027
40%	-8,528,692	1,597,109	-1,739,471	-87,032	0	0	808,021
50%	-14,470,061	6,271,896	-2,282,950	-9,792	0	0	0
60%	-10,017,188	-131,081	-38,633	2,233,774	1,086,907	811,247	2,658,724
70%	-6,738,814	0	0	0	0	8,568,244	998,391
80%	-4,461,359	0	-1,498,338	-1,330,336	2,964,864	0	0
90%	-3,519,807	0	0	-453,224	0	0	0
Long Term							
Full Simulation Period[b]	-4,898,268	1,251,613	-767,545	-726	441,515	1,353,078	779,710
Water Year Types[c]							
Wet (32%)	-12,048,149	816,235	-987,606	2,410,435	1,227,262	690,115	369,533
Above Normal (16%)	-7,674,021	1,629,922	-937,382	-202,069	592,912	3,558,449	3,961,527
Below Normal (13%)	-153,824	1,617,921	-698,984	-4,029,289	118,592	4,402,013	501,652
Dry (24%)	208,001	-481,984	-538,699	-671,200	0	-44,221	-276,748
Critical (15%)	740,684	4,338,645	-551,014	-196,480	-393,082	-65,680	237,110

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-24-5. Feather River Below Thermalito Fall-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	33,706,952	34,938,319	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
20%	32,430,525	33,448,191	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
30%	30,802,749	30,707,394	35,198,088	35,198,088	35,198,088	34,871,693	30,204,290
40%	30,204,290	28,651,642	34,431,241	35,196,517	35,198,088	32,691,770	27,098,994
50%	28,046,601	22,379,746	32,691,770	32,847,639	32,691,770	28,651,642	27,098,994
60%	20,241,358	19,345,841	30,447,453	29,997,845	29,180,786	27,840,395	13,899,774
70%	16,962,984	19,214,760	30,408,820	28,651,642	28,651,642	11,990,462	10,224,170
80%	14,685,529	19,214,760	30,408,820	22,517,048	25,686,778	10,224,170	10,224,170
90%	13,743,977	19,214,760	28,651,642	15,221,904	10,224,170	10,224,170	10,224,170
Long Term							
Full Simulation Period[b]	24,392,133	25,520,412	32,031,555	29,332,859	28,591,614	24,627,737	22,139,012
Water Year Types[c]							
Wet (32%)	23,110,223	25,465,715	31,806,280	26,883,379	20,884,575	14,520,956	11,573,794
Above Normal (16%)	17,898,191	27,096,493	32,757,766	27,492,250	30,383,035	23,248,973	14,277,054
Below Normal (13%)	23,677,135	22,580,278	32,461,765	33,633,302	34,375,109	29,963,337	31,465,154
Dry (24%)	26,681,930	25,839,785	31,800,234	30,689,805	32,732,891	32,353,485	32,137,042
Critical (15%)	31,043,793	26,094,337	31,724,101	30,430,409	31,145,831	30,252,214	28,335,089

Alternative 3

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	33,777,304	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
20%	32,485,908	35,110,630	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
30%	30,815,896	32,779,690	35,198,088	35,198,088	35,198,088	35,198,088	30,204,290
40%	30,204,290	31,083,556	34,007,312	35,198,088	35,198,088	32,691,770	27,098,994
50%	29,870,769	28,651,642	32,691,770	33,312,011	32,691,770	28,651,642	27,098,994
60%	26,684,954	22,345,634	30,408,820	32,691,770	30,267,693	28,651,642	15,022,238
70%	20,325,531	19,214,760	30,408,820	28,651,642	28,651,642	12,690,134	10,224,170
80%	15,989,853	19,214,760	28,706,794	25,706,241	28,651,642	10,224,170	10,224,170
90%	14,282,070	19,214,760	28,651,642	14,626,163	10,224,170	10,224,170	10,224,170
Long Term							
Full Simulation Period[b]	25,697,720	27,238,854	31,755,575	29,653,744	28,860,880	25,189,774	22,174,847
Water Year Types[c]							
Wet (32%)	25,123,354	26,579,504	31,294,094	26,714,836	21,582,367	15,207,515	11,573,668
Above Normal (16%)	18,163,474	28,551,699	32,389,360	27,961,666	30,966,711	25,642,082	15,051,212
Below Normal (13%)	25,953,862	25,518,911	32,624,077	33,279,166	34,475,983	29,834,397	31,464,643
Dry (24%)	27,532,535	27,944,987	31,911,673	31,764,503	32,730,727	32,309,964	31,769,600
Critical (15%)	31,811,457	27,644,926	31,012,559	31,013,227	30,752,748	30,203,445	28,354,439

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	70,352	259,769	0	0	0	0	0
20%	55,383	1,662,440	0	0	0	0	0
30%	13,147	2,072,296	0	0	0	326,395	0
40%	0	2,431,914	**-423,929**	1,571	0	0	0
50%	1,824,168	6,271,896	0	464,372	0	0	0
60%	6,443,596	2,999,794	**-38,633**	2,693,925	1,086,907	811,247	1,122,464
70%	3,362,547	0	0	0	0	699,672	0
80%	1,304,324	0	**-1,702,026**	3,189,193	2,964,864	0	0
90%	538,093	0	0	**-595,741**	0	0	0
Long Term							
Full Simulation Period[b]	1,305,587	1,718,442	**-275,981**	320,885	269,265	562,036	35,835
Water Year Types[c]							
Wet (32%)	2,013,131	1,113,788	**-512,187**	**-168,543**	697,793	686,559	**-126**
Above Normal (16%)	265,283	1,455,206	**-368,405**	469,416	583,676	2,393,110	774,158
Below Normal (13%)	2,276,727	2,938,633	162,312	**-354,136**	100,874	**-128,939**	**-511**
Dry (24%)	850,605	2,105,202	111,440	1,074,697	**-2,164**	**-43,521**	**-367,442**
Critical (15%)	767,664	1,550,589	**-711,543**	582,818	**-393,082**	**-48,770**	19,350

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-24-6. Feather River Below Thermalito Fall-run Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	33,706,952	34,938,319	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
20%	32,430,525	33,448,191	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
30%	30,802,749	30,707,394	35,198,088	35,198,088	35,198,088	34,871,693	30,204,290
40%	30,204,290	28,651,642	34,431,241	35,196,517	35,198,088	32,691,770	27,098,994
50%	28,046,601	22,379,746	32,691,770	32,847,639	32,691,770	28,651,642	27,098,994
60%	20,241,358	19,345,841	30,447,453	29,997,845	29,180,786	27,840,395	13,899,774
70%	16,962,984	19,214,760	30,408,820	28,651,642	28,651,642	11,990,462	10,224,170
80%	14,685,529	19,214,760	30,408,820	22,517,048	25,686,778	10,224,170	10,224,170
90%	13,743,977	19,214,760	28,651,642	15,221,904	10,224,170	10,224,170	10,224,170
Long Term							
Full Simulation Period[b]	24,392,133	25,520,412	32,031,555	29,332,859	28,591,614	24,627,737	22,139,012
Water Year Types[c]							
Wet (32%)	23,110,223	25,465,715	31,806,280	26,883,379	20,884,575	14,520,956	11,573,794
Above Normal (16%)	17,898,191	27,096,493	32,757,766	27,492,250	30,383,035	23,248,973	14,277,054
Below Normal (13%)	23,677,135	22,580,278	32,461,765	33,633,302	34,375,109	29,963,337	31,465,154
Dry (24%)	26,681,930	25,839,785	31,800,234	30,689,805	32,732,891	32,353,485	32,137,042
Critical (15%)	31,043,793	26,094,337	31,724,101	30,430,409	31,145,831	30,252,214	28,335,089

Alternative 5

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	33,865,465	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
20%	31,372,250	34,798,753	35,198,088	35,198,088	35,198,088	35,198,088	35,198,088
30%	30,204,290	32,691,770	33,939,911	35,198,088	35,198,088	35,198,088	30,533,003
40%	24,815,466	30,440,840	32,691,770	35,087,554	35,198,088	32,778,926	27,597,049
50%	13,460,109	28,651,642	30,408,820	32,837,442	32,691,770	30,671,706	27,098,994
60%	10,224,170	19,214,760	30,408,820	32,401,804	30,267,693	28,651,642	16,549,156
70%	10,224,170	19,214,760	30,408,820	28,651,642	28,651,642	20,368,760	12,334,457
80%	10,224,170	19,214,760	29,386,480	21,227,294	28,651,642	10,224,170	10,224,170
90%	10,224,170	19,214,760	28,651,642	14,734,634	10,224,170	10,224,170	10,224,170
Long Term							
Full Simulation Period[b]	19,547,683	26,775,449	31,310,168	29,317,610	28,943,166	26,104,257	22,938,320
Water Year Types[c]							
Wet (32%)	11,076,085	26,159,579	30,814,718	29,324,948	21,828,184	15,211,109	11,941,464
Above Normal (16%)	10,224,170	28,750,622	32,185,751	27,296,663	30,976,207	27,656,337	18,474,607
Below Normal (13%)	23,225,254	24,198,277	31,762,781	29,607,819	34,493,209	34,365,349	31,955,180
Dry (24%)	27,221,390	25,486,065	31,223,266	29,970,496	32,732,891	32,309,793	31,857,927
Critical (15%)	31,842,668	30,481,444	31,165,034	30,136,903	30,752,748	30,109,432	28,469,065

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)						
Statistic	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Probability of Exceedance[a]							
10%	158,513	259,769	0	0	0	0	0
20%	**-1,058,275**	1,350,562	0	0	0	0	0
30%	**-598,459**	1,984,376	**-1,258,177**	0	0	326,395	328,713
40%	**-5,388,824**	1,789,198	**-1,739,471**	**-108,962**	0	87,156	498,055
50%	**-14,586,492**	6,271,896	**-2,282,950**	**-10,197**	0	2,020,064	0
60%	**-10,017,188**	**-131,081**	**-38,633**	2,403,960	1,086,907	811,247	2,649,382
70%	**-6,738,814**	0	0	0	0	8,378,299	2,110,287
80%	**-4,461,359**	0	**-1,022,340**	**-1,289,754**	2,964,864	0	0
90%	**-3,519,807**	0	0	**-487,270**	0	0	0
Long Term							
Full Simulation Period[b]	**-4,844,449**	1,255,037	**-721,388**	**-15,249**	351,551	1,476,520	799,309
Water Year Types[c]							
Wet (32%)	**-12,034,138**	693,863	**-991,563**	2,441,569	943,610	690,153	367,671
Above Normal (16%)	**-7,674,021**	1,654,129	**-572,015**	**-195,587**	593,172	4,407,364	4,197,552
Below Normal (13%)	**-451,881**	1,617,999	**-698,984**	**-4,025,483**	118,099	4,402,013	490,026
Dry (24%)	539,461	**-353,720**	**-576,967**	**-719,310**	0	**-43,692**	**-279,116**
Critical (15%)	798,875	4,387,107	**-559,068**	**-293,506**	**-393,082**	**-142,782**	133,976

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.25. American River below Nimbus Fall-run Spawning WUA

Table C-25-1. American River Below Nimbus Fall-Run Spawning WUA, Monthly WUA

No Action Alternative

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	878,663	880,132	881,528
20%	868,978	874,597	881,528
30%	862,503	872,517	881,528
40%	862,503	855,799	876,343
50%	862,503	833,195	859,903
60%	859,526	767,728	791,242
70%	821,118	740,252	609,089
80%	749,898	609,089	467,889
90%	609,089	446,307	282,031
Long Term			
Full Simulation Period[b]	793,199	745,474	709,367
Water Year Types[c]			
Wet (32%)	836,993	709,662	566,617
Above Normal (16%)	734,467	710,743	695,308
Below Normal (13%)	801,950	771,543	795,846
Dry (24%)	782,142	780,077	816,670
Critical (15%)	772,342	779,125	775,777

Alternative 1

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	872,929	880,132	881,528
20%	862,503	879,325	881,528
30%	862,503	874,395	876,990
40%	862,503	868,521	870,868
50%	862,503	841,739	823,381
60%	862,503	762,862	743,750
70%	837,871	689,086	609,089
80%	674,314	609,089	466,520
90%	600,397	403,562	250,680
Long Term			
Full Simulation Period[b]	786,647	741,731	688,437
Water Year Types[c]			
Wet (32%)	825,953	720,015	533,793
Above Normal (16%)	731,801	693,422	667,877
Below Normal (13%)	795,680	772,032	777,325
Dry (24%)	771,424	766,495	799,125
Critical (15%)	777,991	772,070	779,815

Alternative 1 minus No Action Alternative

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	**-5,734**	0	0
20%	**-6,475**	4,727	0
30%	0	1,878	**-4,538**
40%	0	12,721	**-5,475**
50%	0	8,544	**-36,522**
60%	2,978	**-4,866**	**-47,493**
70%	16,752	**-51,166**	0
80%	**-75,584**	0	**-1,369**
90%	**-8,692**	**-42,745**	**-31,351**
Long Term			
Full Simulation Period[b]	**-6,552**	**-3,743**	**-20,929**
Water Year Types[c]			
Wet (32%)	**-11,041**	10,353	**-32,824**
Above Normal (16%)	**-2,666**	**-17,320**	**-27,431**
Below Normal (13%)	**-6,270**	489	**-18,521**
Dry (24%)	**-10,718**	**-13,582**	**-17,545**
Critical (15%)	5,649	**-7,055**	4,038

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-25-2. American River Below Nimbus Fall-Run Spawning WUA, Monthly WUA

No Action Alternative

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	878,663	880,132	881,528
20%	868,978	874,597	881,528
30%	862,503	872,517	881,528
40%	862,503	855,799	876,343
50%	862,503	833,195	859,903
60%	859,526	767,728	791,242
70%	821,118	740,252	609,089
80%	749,898	609,089	467,889
90%	609,089	446,307	282,031
Long Term			
Full Simulation Period[b]	793,199	745,474	709,367
Water Year Types[c]			
Wet (32%)	836,993	709,662	566,617
Above Normal (16%)	734,467	710,743	695,308
Below Normal (13%)	801,950	771,543	795,846
Dry (24%)	782,142	780,077	816,670
Critical (15%)	772,342	779,125	775,777

Alternative 3

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	879,083	880,132	881,528
20%	866,138	880,132	881,528
30%	862,503	874,395	876,343
40%	862,503	869,546	862,177
50%	862,503	846,219	815,683
60%	862,503	796,665	743,774
70%	845,529	730,285	609,089
80%	774,565	619,125	466,542
90%	609,089	488,788	247,453
Long Term			
Full Simulation Period[b]	798,897	753,761	693,122
Water Year Types[c]			
Wet (32%)	829,926	727,108	535,360
Above Normal (16%)	751,660	711,941	683,812
Below Normal (13%)	801,041	790,161	772,859
Dry (24%)	789,040	774,015	809,347
Critical (15%)	797,304	789,694	778,226

Alternative 3 minus No Action Alternative

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	419	0	0
20%	**-2,841**	5,535	0
30%	0	1,878	**-5,186**
40%	0	13,746	**-14,166**
50%	0	13,024	**-44,220**
60%	2,978	28,937	**-47,468**
70%	24,411	**-9,967**	0
80%	24,667	10,037	**-1,347**
90%	0	42,481	**-34,578**
Long Term			
Full Simulation Period[b]	5,698	8,287	**-16,245**
Water Year Types[c]			
Wet (32%)	**-7,068**	17,446	**-31,258**
Above Normal (16%)	17,194	1,198	**-11,496**
Below Normal (13%)	**-909**	18,618	**-22,986**
Dry (24%)	6,898	**-6,062**	**-7,323**
Critical (15%)	24,962	10,569	2,449

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-25-3. American River Below Nimbus Fall-Run Spawning WUA, Monthly WUA

No Action Alternative

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	878,663	880,132	881,528
20%	868,978	874,597	881,528
30%	862,503	872,517	881,528
40%	862,503	855,799	876,343
50%	862,503	833,195	859,903
60%	859,526	767,728	791,242
70%	821,118	740,252	609,089
80%	749,898	609,089	467,889
90%	609,089	446,307	282,031
Long Term			
Full Simulation Period[b]	793,199	745,474	709,367
Water Year Types[c]			
Wet (32%)	836,993	709,662	566,617
Above Normal (16%)	734,467	710,743	695,308
Below Normal (13%)	801,950	771,543	795,846
Dry (24%)	782,142	780,077	816,670
Critical (15%)	772,342	779,125	775,777

Alternative 5

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	875,329	880,132	881,528
20%	863,849	875,412	881,528
30%	862,503	872,536	878,964
40%	862,503	854,056	875,153
50%	862,503	824,470	854,006
60%	853,955	767,862	795,540
70%	822,159	734,101	609,089
80%	750,763	609,089	468,296
90%	609,089	455,653	281,677
Long Term			
Full Simulation Period[b]	790,823	745,710	707,446
Water Year Types[c]			
Wet (32%)	834,432	706,010	567,264
Above Normal (16%)	747,545	709,433	692,541
Below Normal (13%)	799,217	769,383	781,534
Dry (24%)	783,195	782,444	817,858
Critical (15%)	748,238	788,103	775,390

Alternative 5 minus No Action Alternative

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	-3,335	0	0
20%	-5,129	815	0
30%	0	20	-2,564
40%	0	-1,743	-1,190
50%	0	-8,726	-5,897
60%	-5,570	134	4,297
70%	1,041	-6,150	0
80%	865	0	407
90%	0	9,346	-354
Long Term			
Full Simulation Period[b]	-2,376	236	-1,920
Water Year Types[c]			
Wet (32%)	-2,561	-3,652	647
Above Normal (16%)	13,078	-1,309	-2,767
Below Normal (13%)	-2,733	-2,160	-14,312
Dry (24%)	1,053	2,366	1,188
Critical (15%)	-24,104	8,978	-387

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-25-4. American River Below Nimbus Fall-Run Spawning WUA, Monthly WUA

Second Basis of Comparison

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	872,929	880,132	881,528
20%	862,503	879,325	881,528
30%	862,503	874,395	876,990
40%	862,503	868,521	870,868
50%	862,503	841,739	823,381
60%	862,503	762,862	743,750
70%	837,871	689,086	609,089
80%	674,314	609,089	466,520
90%	600,397	403,562	250,680
Long Term			
Full Simulation Period[b]	786,647	741,731	688,437
Water Year Types[c]			
Wet (32%)	825,953	720,015	533,793
Above Normal (16%)	731,801	693,422	667,877
Below Normal (13%)	795,680	772,032	777,325
Dry (24%)	771,424	766,495	799,125
Critical (15%)	777,991	772,070	779,815

No Action Alternative

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	878,663	880,132	881,528
20%	868,978	874,597	881,528
30%	862,503	872,517	881,528
40%	862,503	855,799	876,343
50%	862,503	833,195	859,903
60%	859,526	767,728	791,242
70%	821,118	740,252	609,089
80%	749,898	609,089	467,889
90%	609,089	446,307	282,031
Long Term			
Full Simulation Period[b]	793,199	745,474	709,367
Water Year Types[c]			
Wet (32%)	836,993	709,662	566,617
Above Normal (16%)	734,467	710,743	695,308
Below Normal (13%)	801,950	771,543	795,846
Dry (24%)	782,142	780,077	816,670
Critical (15%)	772,342	779,125	775,777

No Action Alternative minus Second Basis of Comparison

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	5,734	0	0
20%	6,475	**-4,727**	0
30%	0	**-1,878**	4,538
40%	0	**-12,721**	5,475
50%	0	**-8,544**	36,522
60%	**-2,978**	4,866	47,493
70%	**-16,752**	51,166	0
80%	75,584	0	1,369
90%	8,692	42,745	31,351
Long Term			
Full Simulation Period[b]	6,552	3,743	20,929
Water Year Types[c]			
Wet (32%)	11,041	**-10,353**	32,824
Above Normal (16%)	2,666	17,320	27,431
Below Normal (13%)	6,270	**-489**	18,521
Dry (24%)	10,718	13,582	17,545
Critical (15%)	**-5,649**	7,055	**-4,038**

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-25-5. American River Below Nimbus Fall-Run Spawning WUA, Monthly WUA

Second Basis of Comparison

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	872,929	880,132	881,528
20%	862,503	879,325	881,528
30%	862,503	874,395	876,990
40%	862,503	868,521	870,868
50%	862,503	841,739	823,381
60%	862,503	762,862	743,750
70%	837,871	689,086	609,089
80%	674,314	609,089	466,520
90%	600,397	403,562	250,680
Long Term			
Full Simulation Period[b]	786,647	741,731	688,437
Water Year Types[c]			
Wet (32%)	825,953	720,015	533,793
Above Normal (16%)	731,801	693,422	667,877
Below Normal (13%)	795,680	772,032	777,325
Dry (24%)	771,424	766,495	799,125
Critical (15%)	777,991	772,070	779,815

Alternative 3

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	879,083	880,132	881,528
20%	866,138	880,132	881,528
30%	862,503	874,395	876,343
40%	862,503	869,546	862,177
50%	862,503	846,219	815,683
60%	862,503	796,665	743,774
70%	845,529	730,285	609,089
80%	774,565	619,125	466,542
90%	609,089	488,788	247,453
Long Term			
Full Simulation Period[b]	798,897	753,761	693,122
Water Year Types[c]			
Wet (32%)	829,926	727,108	535,360
Above Normal (16%)	751,660	711,941	683,812
Below Normal (13%)	801,041	790,161	772,859
Dry (24%)	789,040	774,015	809,347
Critical (15%)	797,304	789,694	778,226

Alternative 3 minus Second Basis of Comparison

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	6,153	0	0
20%	3,634	807	0
30%	0	0	**-647**
40%	0	1,025	**-8,691**
50%	0	4,480	**-7,698**
60%	0	33,803	24
70%	7,659	41,199	0
80%	100,251	10,037	22
90%	8,692	85,226	**-3,228**
Long Term			
Full Simulation Period[b]	12,250	12,030	4,685
Water Year Types[c]			
Wet (32%)	3,973	7,093	1,566
Above Normal (16%)	19,860	18,518	15,935
Below Normal (13%)	5,361	18,129	**-4,465**
Dry (24%)	17,616	7,520	10,222
Critical (15%)	19,313	17,624	**-1,589**

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-25-6. American River Below Nimbus Fall-Run Spawning WUA, Monthly WUA

Second Basis of Comparison

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	872,929	880,132	881,528
20%	862,503	879,325	881,528
30%	862,503	874,395	876,990
40%	862,503	868,521	870,868
50%	862,503	841,739	823,381
60%	862,503	762,862	743,750
70%	837,871	689,086	609,089
80%	674,314	609,089	466,520
90%	600,397	403,562	250,680
Long Term			
Full Simulation Period[b]	786,647	741,731	688,437
Water Year Types[c]			
Wet (32%)	825,953	720,015	533,793
Above Normal (16%)	731,801	693,422	667,877
Below Normal (13%)	795,680	772,032	777,325
Dry (24%)	771,424	766,495	799,125
Critical (15%)	777,991	772,070	779,815

Alternative 5

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	875,329	880,132	881,528
20%	863,849	875,412	881,528
30%	862,503	872,536	878,964
40%	862,503	854,056	875,153
50%	862,503	824,470	854,006
60%	853,955	767,862	795,540
70%	822,159	734,101	609,089
80%	750,763	609,089	468,296
90%	609,089	455,653	281,677
Long Term			
Full Simulation Period[b]	790,823	745,710	707,446
Water Year Types[c]			
Wet (32%)	834,432	706,010	567,264
Above Normal (16%)	747,545	709,433	692,541
Below Normal (13%)	799,217	769,383	781,534
Dry (24%)	783,195	782,444	817,858
Critical (15%)	748,238	788,103	775,390

Alternative 5 minus Second Basis of Comparison

Statistic	Monthly WUA (Feet2) Oct	Nov	Dec
Probability of Exceedance[a]			
10%	2,399	0	0
20%	1,346	**-3,912**	0
30%	0	**-1,858**	1,974
40%	0	**-14,464**	4,285
50%	0	**-17,270**	30,625
60%	**-8,548**	5,000	51,790
70%	**-15,711**	45,016	0
80%	76,449	0	1,777
90%	8,692	52,091	30,997
Long Term			
Full Simulation Period[b]	4,176	3,979	19,009
Water Year Types[c]			
Wet (32%)	8,480	**-14,005**	33,471
Above Normal (16%)	15,745	16,011	24,664
Below Normal (13%)	3,537	**-2,649**	4,209
Dry (24%)	11,771	15,948	18,733
Critical (15%)	**-29,753**	16,033	**-4,424**

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

C.26. American River below Nimbus Steelhead Spawning WUA

Table C-26-1. American River Below Nimbus Steelhead Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	285,223	279,028	277,336	280,548	280,548
20%	285,223	279,028	271,755	264,437	276,864
30%	285,223	273,342	263,024	251,454	269,281
40%	280,548	262,440	241,823	205,382	238,344
50%	274,021	231,899	195,347	195,347	206,383
60%	252,244	194,219	137,490	195,347	195,347
70%	195,347	142,694	105,666	167,825	186,789
80%	164,818	98,910	71,518	111,692	154,244
90%	93,384	70,711	70,711	81,209	107,736
Long Term					
Full Simulation Period[b]	229,569	199,778	179,729	193,238	210,109
Water Year Types[c]					
Wet (32%)	186,565	128,944	115,025	157,936	183,565
Above Normal (16%)	224,484	198,784	161,582	169,629	230,626
Below Normal (13%)	256,911	243,922	217,841	242,027	227,164
Dry (24%)	262,329	254,455	240,539	222,522	228,484
Critical (15%)	248,593	222,736	203,294	201,770	199,135

Alternative 1

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	285,223	279,028	272,186	280,548	281,607
20%	285,223	279,028	263,555	268,472	278,599
30%	282,337	273,690	253,891	249,447	274,209
40%	277,607	264,248	226,168	205,760	252,416
50%	263,613	222,420	195,347	195,347	235,044
60%	240,908	195,347	128,662	195,347	195,347
70%	195,347	145,999	103,353	166,005	187,494
80%	155,541	99,151	72,131	106,868	154,447
90%	81,014	70,711	70,711	80,740	107,736
Long Term					
Full Simulation Period[b]	223,019	199,831	175,836	192,340	213,917
Water Year Types[c]					
Wet (32%)	176,198	128,443	111,109	157,999	183,660
Above Normal (16%)	215,958	193,304	156,690	166,724	230,884
Below Normal (13%)	251,048	248,135	207,597	242,179	235,743
Dry (24%)	256,972	250,904	235,574	223,024	232,560
Critical (15%)	249,833	232,173	208,143	197,667	210,012

Alternative 1 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	0	0	**-5,150**	0	1,058
20%	0	0	**-8,200**	4,035	1,735
30%	**-2,886**	349	**-9,133**	**-2,007**	4,928
40%	**-2,941**	1,808	**-15,655**	378	14,072
50%	**-10,408**	**-9,479**	0	0	28,662
60%	**-11,335**	1,128	**-8,829**	0	0
70%	0	3,305	**-2,314**	**-1,820**	705
80%	**-9,277**	241	612	**-4,824**	203
90%	**-12,370**	0	0	**-470**	0
Long Term					
Full Simulation Period[b]	**-6,550**	52	**-3,893**	**-898**	3,808
Water Year Types[c]					
Wet (32%)	**-10,367**	**-502**	**-3,916**	62	96
Above Normal (16%)	**-8,526**	**-5,480**	**-4,893**	**-2,904**	259
Below Normal (13%)	**-5,863**	4,213	**-10,244**	152	8,579
Dry (24%)	**-5,357**	**-3,552**	**-4,964**	502	4,076
Critical (15%)	1,239	9,437	4,848	**-4,103**	10,878

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-26-2. American River Below Nimbus Steelhead Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	285,223	279,028	277,336	280,548	280,548
20%	285,223	279,028	271,755	264,437	276,864
30%	285,223	273,342	263,024	251,454	269,281
40%	280,548	262,440	241,823	205,382	238,344
50%	274,021	231,899	195,347	195,347	206,383
60%	252,244	194,219	137,490	195,347	195,347
70%	195,347	142,694	105,666	167,825	186,789
80%	164,818	98,910	71,518	111,692	154,244
90%	93,384	70,711	70,711	81,209	107,736
Long Term					
Full Simulation Period[b]	229,569	199,778	179,729	193,238	210,109
Water Year Types[c]					
Wet (32%)	186,565	128,944	115,025	157,936	183,565
Above Normal (16%)	224,484	198,784	161,582	169,629	230,626
Below Normal (13%)	256,911	243,922	217,841	242,027	227,164
Dry (24%)	262,329	254,455	240,539	222,522	228,484
Critical (15%)	248,593	222,736	203,294	201,770	199,135

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	285,223	280,378	272,186	280,548	280,548
20%	285,223	279,028	263,024	268,472	276,329
30%	280,548	274,553	252,405	249,823	270,028
40%	275,387	264,772	228,189	205,760	244,427
50%	261,755	222,271	195,347	195,347	226,177
60%	240,905	195,347	128,655	195,347	195,347
70%	195,347	143,311	103,353	166,005	187,494
80%	156,211	99,151	72,200	106,868	154,304
90%	81,071	70,711	70,711	80,979	107,736
Long Term					
Full Simulation Period[b]	224,527	200,366	175,739	192,500	211,277
Water Year Types[c]					
Wet (32%)	176,682	128,381	111,139	157,999	183,643
Above Normal (16%)	220,890	197,449	158,358	166,569	230,799
Below Normal (13%)	250,017	246,437	206,868	242,167	229,934
Dry (24%)	260,218	251,966	235,063	222,283	227,573
Critical (15%)	249,279	231,262	207,131	200,181	205,740

Alternative 3 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	0	1,350	**-5,150**	0	0
20%	0	0	**-8,731**	4,035	**-536**
30%	**-4,674**	1,212	**-10,619**	**-1,631**	748
40%	**-5,162**	2,332	**-13,635**	378	6,083
50%	**-12,266**	**-9,628**	0	0	19,794
60%	**-11,338**	1,128	**-8,835**	0	0
70%	0	617	**-2,314**	**-1,820**	705
80%	**-8,606**	241	682	**-4,824**	60
90%	**-12,313**	0	0	**-230**	0
Long Term					
Full Simulation Period[b]	**-5,043**	588	**-3,990**	**-738**	1,168
Water Year Types[c]					
Wet (32%)	**-9,884**	**-563**	**-3,887**	62	78
Above Normal (16%)	**-3,594**	**-1,335**	**-3,224**	**-3,060**	174
Below Normal (13%)	**-6,894**	2,515	**-10,973**	139	2,769
Dry (24%)	**-2,111**	**-2,489**	**-5,476**	**-240**	**-911**
Critical (15%)	686	8,525	3,837	**-1,589**	6,606

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-26-3. American River Below Nimbus Steelhead Spawning WUA, Monthly WUA

No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	285,223	279,028	277,336	280,548	280,548
20%	285,223	279,028	271,755	264,437	276,864
30%	285,223	273,342	263,024	251,454	269,281
40%	280,548	262,440	241,823	205,382	238,344
50%	274,021	231,899	195,347	195,347	206,383
60%	252,244	194,219	137,490	195,347	195,347
70%	195,347	142,694	105,666	167,825	186,789
80%	164,818	98,910	71,518	111,692	154,244
90%	93,384	70,711	70,711	81,209	107,736
Long Term					
Full Simulation Period[b]	229,569	199,778	179,729	193,238	210,109
Water Year Types[c]					
Wet (32%)	186,565	128,944	115,025	157,936	183,565
Above Normal (16%)	224,484	198,784	161,582	169,629	230,626
Below Normal (13%)	256,911	243,922	217,841	242,027	227,164
Dry (24%)	262,329	254,455	240,539	222,522	228,484
Critical (15%)	248,593	222,736	203,294	201,770	199,135

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	285,223	279,028	277,336	280,548	280,548
20%	285,223	279,028	271,741	264,360	276,329
30%	284,188	273,228	259,731	251,261	266,932
40%	280,520	262,675	234,998	205,307	238,344
50%	272,556	232,665	195,347	195,347	200,225
60%	253,403	189,969	136,905	195,347	195,347
70%	195,347	140,468	105,656	165,839	186,539
80%	166,533	98,405	71,525	111,692	154,260
90%	93,239	70,711	70,711	81,131	107,736
Long Term					
Full Simulation Period[b]	228,903	198,721	179,687	193,113	209,482
Water Year Types[c]					
Wet (32%)	186,628	128,857	115,004	157,938	183,569
Above Normal (16%)	223,573	199,284	161,575	169,488	230,609
Below Normal (13%)	252,282	235,698	219,524	241,747	225,309
Dry (24%)	262,804	254,505	239,729	222,559	228,468
Critical (15%)	248,342	222,615	202,869	201,260	196,590

Alternative 5 minus No Action Alternative

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	0	0	0	0	0
20%	0	0	-14	-77	-536
30%	-1,035	-113	-3,293	-193	-2,349
40%	-28	235	-6,825	-75	0
50%	-1,465	766	0	0	-6,157
60%	1,159	-4,250	-585	0	0
70%	0	-2,226	-10	-1,986	-250
80%	1,716	-505	7	0	16
90%	-144	0	0	-79	0
Long Term					
Full Simulation Period[b]	-666	-1,057	-42	-125	-627
Water Year Types[c]					
Wet (32%)	63	-87	-21	2	4
Above Normal (16%)	-911	500	-7	-141	-16
Below Normal (13%)	-4,629	-8,224	1,683	-280	-1,855
Dry (24%)	476	50	-809	36	-16
Critical (15%)	-251	-122	-426	-510	-2,545

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-26-4. American River Below Nimbus Steelhead Spawning WUA, Monthly WUA

Second Basis of Comparison

Statistic	Monthly WUA (Feet2) Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	285,223	279,028	272,186	280,548	281,607
20%	285,223	279,028	263,555	268,472	278,599
30%	282,337	273,690	253,891	249,447	274,209
40%	277,607	264,248	226,168	205,760	252,416
50%	263,613	222,420	195,347	195,347	235,044
60%	240,908	195,347	128,662	195,347	195,347
70%	195,347	145,999	103,353	166,005	187,494
80%	155,541	99,151	72,131	106,868	154,447
90%	81,014	70,711	70,711	80,740	107,736
Long Term					
Full Simulation Period[b]	223,019	199,831	175,836	192,340	213,917
Water Year Types[c]					
Wet (32%)	176,198	128,443	111,109	157,999	183,660
Above Normal (16%)	215,958	193,304	156,690	166,724	230,884
Below Normal (13%)	251,048	248,135	207,597	242,179	235,743
Dry (24%)	256,972	250,904	235,574	223,024	232,560
Critical (15%)	249,833	232,173	208,143	197,667	210,012

No Action Alternative

Statistic	Monthly WUA (Feet2) Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	285,223	279,028	277,336	280,548	280,548
20%	285,223	279,028	271,755	264,437	276,864
30%	285,223	273,342	263,024	251,454	269,281
40%	280,548	262,440	241,823	205,382	238,344
50%	274,021	231,899	195,347	195,347	206,383
60%	252,244	194,219	137,490	195,347	195,347
70%	195,347	142,694	105,666	167,825	186,789
80%	164,818	98,910	71,518	111,692	154,244
90%	93,384	70,711	70,711	81,209	107,736
Long Term					
Full Simulation Period[b]	229,569	199,778	179,729	193,238	210,109
Water Year Types[c]					
Wet (32%)	186,565	128,944	115,025	157,936	183,565
Above Normal (16%)	224,484	198,784	161,582	169,629	230,626
Below Normal (13%)	256,911	243,922	217,841	242,027	227,164
Dry (24%)	262,329	254,455	240,539	222,522	228,484
Critical (15%)	248,593	222,736	203,294	201,770	199,135

No Action Alternative minus Second Basis of Comparison

Statistic	Monthly WUA (Feet2) Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	0	0	5,150	0	-1,058
20%	0	0	8,200	-4,035	-1,735
30%	2,886	-349	9,133	2,007	-4,928
40%	2,941	-1,808	15,655	-378	-14,072
50%	10,408	9,479	0	0	-28,662
60%	11,335	-1,128	8,829	0	0
70%	0	-3,305	2,314	1,820	-705
80%	9,277	-241	-612	4,824	-203
90%	12,370	0	0	470	0
Long Term					
Full Simulation Period[b]	6,550	-52	3,893	898	-3,808
Water Year Types[c]					
Wet (32%)	10,367	502	3,916	-62	-96
Above Normal (16%)	8,526	5,480	4,893	2,904	-259
Below Normal (13%)	5,863	-4,213	10,244	-152	-8,579
Dry (24%)	5,357	3,552	4,964	-502	-4,076
Critical (15%)	-1,239	-9,437	-4,848	4,103	-10,878

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-26-5. American River Below Nimbus Steelhead Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	285,223	279,028	272,186	280,548	281,607
20%	285,223	279,028	263,555	268,472	278,599
30%	282,337	273,690	253,891	249,447	274,209
40%	277,607	264,248	226,168	205,760	252,416
50%	263,613	222,420	195,347	195,347	235,044
60%	240,908	195,347	128,662	195,347	195,347
70%	195,347	145,999	103,353	166,005	187,494
80%	155,541	99,151	72,131	106,868	154,447
90%	81,014	70,711	70,711	80,740	107,736
Long Term					
Full Simulation Period[b]	223,019	199,831	175,836	192,340	213,917
Water Year Types[c]					
Wet (32%)	176,198	128,443	111,109	157,999	183,660
Above Normal (16%)	215,958	193,304	156,690	166,724	230,884
Below Normal (13%)	251,048	248,135	207,597	242,179	235,743
Dry (24%)	256,972	250,904	235,574	223,024	232,560
Critical (15%)	249,833	232,173	208,143	197,667	210,012

Alternative 3

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	285,223	280,378	272,186	280,548	280,548
20%	285,223	279,028	263,024	268,472	276,329
30%	280,548	274,553	252,405	249,823	270,028
40%	275,387	264,772	228,189	205,760	244,427
50%	261,755	222,271	195,347	195,347	226,177
60%	240,905	195,347	128,655	195,347	195,347
70%	195,347	143,311	103,353	166,005	187,494
80%	156,211	99,151	72,200	106,868	154,304
90%	81,071	70,711	70,711	80,979	107,736
Long Term					
Full Simulation Period[b]	224,527	200,366	175,739	192,500	211,277
Water Year Types[c]					
Wet (32%)	176,682	128,381	111,139	157,999	183,643
Above Normal (16%)	220,890	197,449	158,358	166,569	230,799
Below Normal (13%)	250,017	246,437	206,868	242,167	229,934
Dry (24%)	260,218	251,966	235,063	222,283	227,573
Critical (15%)	249,279	231,262	207,131	200,181	205,740

Alternative 3 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	0	1,350	0	0	-1,058
20%	0	0	-531	0	-2,271
30%	-1,788	863	-1,485	376	-4,181
40%	-2,220	524	2,020	0	-7,988
50%	-1,858	-148	0	0	-8,867
60%	-3	0	-6	0	0
70%	0	-2,688	0	-1	0
80%	671	0	70	0	-143
90%	57	0	0	240	0
Long Term					
Full Simulation Period[b]	1,507	536	-97	161	-2,640
Water Year Types[c]					
Wet (32%)	483	-62	29	0	-18
Above Normal (16%)	4,932	4,145	1,668	-156	-85
Below Normal (13%)	-1,031	-1,698	-729	-13	-5,810
Dry (24%)	3,246	1,063	-511	-742	-4,987
Critical (15%)	-553	-912	-1,011	2,514	-4,272

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table C-26-6. American River Below Nimbus Steelhead Spawning WUA, Monthly WUA

Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	285,223	279,028	272,186	280,548	281,607
20%	285,223	279,028	263,555	268,472	278,599
30%	282,337	273,690	253,891	249,447	274,209
40%	277,607	264,248	226,168	205,760	252,416
50%	263,613	222,420	195,347	195,347	235,044
60%	240,908	195,347	128,662	195,347	195,347
70%	195,347	145,999	103,353	166,005	187,494
80%	155,541	99,151	72,131	106,868	154,447
90%	81,014	70,711	70,711	80,740	107,736
Long Term					
Full Simulation Period[b]	223,019	199,831	175,836	192,340	213,917
Water Year Types[c]					
Wet (32%)	176,198	128,443	111,109	157,999	183,660
Above Normal (16%)	215,958	193,304	156,690	166,724	230,884
Below Normal (13%)	251,048	248,135	207,597	242,179	235,743
Dry (24%)	256,972	250,904	235,574	223,024	232,560
Critical (15%)	249,833	232,173	208,143	197,667	210,012

Alternative 5

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	285,223	279,028	277,336	280,548	280,548
20%	285,223	279,028	271,741	264,360	276,329
30%	284,188	273,228	259,731	251,261	266,932
40%	280,520	262,675	234,998	205,307	238,344
50%	272,556	232,665	195,347	195,347	200,225
60%	253,403	189,969	136,905	195,347	195,347
70%	195,347	140,468	105,656	165,839	186,539
80%	166,533	98,405	71,525	111,692	154,260
90%	93,239	70,711	70,711	81,131	107,736
Long Term					
Full Simulation Period[b]	228,903	198,721	179,687	193,113	209,482
Water Year Types[c]					
Wet (32%)	186,628	128,857	115,004	157,938	183,569
Above Normal (16%)	223,573	199,284	161,575	169,488	230,609
Below Normal (13%)	252,282	235,698	219,524	241,747	225,309
Dry (24%)	262,804	254,505	239,729	222,559	228,468
Critical (15%)	248,342	222,615	202,869	201,260	196,590

Alternative 5 minus Second Basis of Comparison

	Monthly WUA (Feet2)				
Statistic	Dec	Jan	Feb	Mar	Apr
Probability of Exceedance[a]					
10%	0	0	5,150	0	**-1,058**
20%	0	0	8,186	**-4,112**	**-2,271**
30%	1,851	**-462**	5,840	1,814	**-7,278**
40%	2,913	**-1,573**	8,830	**-452**	**-14,072**
50%	8,943	10,245	0	0	**-34,819**
60%	12,495	**-5,378**	8,243	0	0
70%	0	**-5,531**	2,304	**-166**	**-955**
80%	10,993	**-746**	**-606**	4,824	**-188**
90%	12,225	0	0	391	0
Long Term					
Full Simulation Period[b]	5,884	**-1,110**	3,851	773	**-4,435**
Water Year Types[c]					
Wet (32%)	10,430	414	3,895	**-61**	**-92**
Above Normal (16%)	7,615	5,980	4,885	2,763	**-275**
Below Normal (13%)	1,234	**-12,438**	11,927	**-432**	**-10,434**
Dry (24%)	5,832	3,601	4,155	**-466**	**-4,092**
Critical (15%)	**-1,490**	**-9,559**	**-5,274**	3,594	**-13,423**

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

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Appendix 9F

Reservoir Fish Analysis Documentation

This appendix provides information about the methods and assumptions used for the Coordinated Long Term Operation of the Central Valley Project (CVP) and State Water Project (SWP) Environmental Impact Statement (EIS) analysis of reservoir fish. It is organized in two main sections:

- Section 9F.1: Reservoir Fish Analysis Methodology and Assumptions
  - The reservoir fish impacts analysis uses modeled monthly reservoir elevations to develop rates of water level change to evaluate the effects on reservoir fish that spawn in the nearshore areas. The species analyzed were Largemouth Bass, Smallmouth Bass, and Spotted Bass. This section describes the overall analytical approach and assumptions.
- Section 9F.2: Reservoir Fish Analysis Results
  - This section presents the survival estimates for each reservoir and fish species evaluated during the spawning period. Statistics are presented in exceedance plots and in tabular format.

9F.1 Reservoir Fish Analysis Methodology and Assumptions

9F.1.1 Reservoir Fish Analysis Methodology

Reservoir storage and surface water elevations in the reservoirs from the CalSim II model were used to analyze the potential effects on reservoir fishes. Although aquatic habitat within the CVP and SWP water supply reservoirs may not be limiting, storage volume is used as an indicator of how much habitat is available to fish species inhabiting these reservoirs. Warm water fish species that inhabit the upper layer of these reservoirs may be affected by fluctuations in storage through changes in reservoir water surface elevations.

The evaluation method used to assess the influence of fluctuating water levels in the reservoirs was developed using the relationship presented in Lee (1999) and by examining literature on nest success levels found in self-sustaining populations of black bass (*Micropterus* spp.). Available literature suggests that nest failure is highly variable among water bodies and between years, but it is not uncommon to have up to 40 percent of nests fail (60 percent survival) (Scott and Crossman 1973). Many self-sustaining black bass populations in North America experience nest success (that is, the nest produces swim-up fry) rates of 21 to 96 percent, with many reported survival rates in the 40 to 60 percent range (Forbes 1981; Hunt and Annett 2002; Steinhart 2004) suggesting that much less than 100 percent survival is required to support a self-sustaining population. Based on the literature review, nest survival probability in excess of 40 percent is assumed to be sufficient to provide for a self-sustaining bass fishery.

The conceptual approach used to evaluate the effects of water surface elevation fluctuations on bass nests was based on a relationship between black bass nest success and water surface elevation reductions developed by Lee (1999) from research conducted on five California reservoirs. Lee (1999) examined the relationship between water surface elevation fluctuation rates and nesting success for Black Bass, and developed nest survival curves for Largemouth, Smallmouth, and Spotted bass. The equations corresponding to the relationship curves are the following:

- *Largemouth Bass Y = -56.378*ln(X)-102.59*
- *Smallmouth Bass Y = -46.466*ln(X)-83.34*
- *Spotted Bass Y = -79.095*ln(X)-94.162*
  - where: X is the fluctuation rate (meter/day) and Y is the percentage of successful nests

Based on the work by Lee (1999), the maximum receding water level rate providing 100 percent successful nesting varied among species, with receding water level rates of less than 0.02, less than 0.01, and less than 0.065 meters per day (m/day) providing successful nesting of 100 percent of the Largemouth Bass, Smallmouth Bass, and Spotted Bass, nests, respectively. Recession rates of 0.07, 0.06, and 0.17 m/day would allow for successful nesting of 50 percent of the Largemouth Bass, Smallmouth Bass, and Spotted Bass, nests, respectively.

For this analysis, water surface elevations at the end of each month from the CalSim II model output were used to calculate the monthly, and subsequently, daily fluctuation rates used to compute the percentage of successful nests using the equations from Lee (1999). CalSim II reports end-of-month (EOM) water surface elevations; therefore, water surface elevations from February through June were used in this analysis (that is, the March fluctuation rate is equal to the March EOM elevation minus the February EOM elevation). The average daily fluctuation rate used as "X" in the equations presented previously to compute the percentage of successful nests during that month was approximated by use of the monthly change in elevation divided by the number of days in that month. The percentage of successful nests was computed based on the equations from Lee (1999) for each month of the potential spawning season for these species.

This assessment is not intended to predict the absolute rate of survival in Black Bass nests, but rather to provide the basis for evaluating the relative differences among alternatives. These results should be viewed as indicators of the relative performance of the alternatives evaluated.

9F.1.2 Reservoir Fish Analysis Scenario Assumptions

This section describes the assumptions for the Reservoir Fish Analysis for the No Action Alternative, Second Basis of Comparison, and other alternatives.

The following CalSim II model simulations were performed as the basis for evaluating the impacts of the Alternatives 1 through 5 as compared to the No

Action Alternative, and the No Action Alternative and Alternatives 1 through 5 as compared to the Second Basis of Comparison:

- No Action Alternative
- Second Basis of Comparison
- Alternative 1 – for simulation purposes, considered the same as Second Basis of Comparison
- Alternative 2 – for simulation purposes, considered the same as No Action Alternative
- Alternative 3
- Alternative 4 – for simulation purposes, considered the same as Second Basis of Comparison
- Alternative 5

Assumptions for each of these alternatives were developed with the surface water modeling tools and are described in Appendix 5A, Section B.

Alternative 1 modeling assumptions are the same as those for the Second Basis of Comparison and Alternative 2 modeling assumptions are the same as those for the No Action Alternative; therefore, the assumptions for those alternatives are not discussed separately in this document.

Assumptions for each of these alternatives are reflected to monthly CalSim II reservoir storage elevations that are used in the Reservoir Fish analysis described in this section.

9F.2 Reservoir Fish Results

Results are provided for each of the following runs separately:

- No Action Alternative
- Second Basis of Comparison
- Alternative 1
- Alternative 3
- Alternative 5

In addition, the same statistics are provided for the following comparisons to establish changes of the alternative with respect to one of the bases of comparison:

- Alternative 1 compared to No Action Alternative
- Alternative 3 compared to No Action Alternative
- Alternative 5 compared to No Action Alternative

- No Action Alternative compared to Second Basis of Comparison
- Alternative 1 compared to Second Basis of Comparison
- Alternative 3 compared to Second Basis of Comparison
- Alternative 5 compared to Second Basis of Comparison

Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 4 results are not presented separately. Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented separately.

The first set of results is provided as probability exceedance curves of nest survival percentage for each reservoir and species of bass. For this analysis, exceedance plots for the percentage of nest survival were generated based on the 82-year CalSim II time period for each of the alternatives and bases of comparison. Differences among alternatives were evaluated using the exceedance probability corresponding to varying levels of survival.

The second set of results is provided as tables summarizing the monthly nest survival percentage for each reservoir and species of bass (as described previously) with monthly exceedance probabilities and long-term averages over the entire CalSim II simulation period. Averages are also provided by water year type.

Exceedance plots and tables, numbered to correspond to the following model results, are presented at the end of this appendix:

- B.1. Trinity Largemouth Bass Survival Percentage
- B.2. Trinity Smallmouth Bass Survival Percentage
- B.3. Trinity Spotted Bass Survival Percentage
- B.4. Shasta Largemouth Bass Survival Percentage
- B.5. Shasta Smallmouth Bass Survival Percentage
- B.6. Shasta Spotted Bass Survival Percentage
- B.7. Oroville Largemouth Bass Survival Percentage
- B.8. Oroville Smallmouth Bass Survival Percentage
- B.9. Oroville Spotted Bass Survival Percentage
- B.10. Folsom Largemouth Bass Survival Percentage
- B.11. Folsom Smallmouth Bass Survival Percentage
- B.12. Folsom Spotted Bass Survival Percentage
- B.13. New Melones Largemouth Bass Survival Percentage
- B.14. New Melones Smallmouth Bass Survival Percentage
- B.15. New Melones Spotted Bass Survival Percentage

9F.3 References

Forbes, A. 1981. *Review of Smallmouth Bass (Micropterus dolomieui) Spawning Requirements and First Year Survival in Lakes*. Wisconsin Department of Natural Resources Research Report 111.

Hunt, J. and C.A. Annett. 2002. *Effects of habitat manipulation on reproductive success of individual largemouth bass in an Ozark Reservoir*. North American Journal of Fisheries Management 22:1201-1208.

Lee, D.P. 1999. *Water Level Fluctuation Criteria for Black Bass in California Reservoirs*. California Department of Fish and Game. Reservoir Research and Management Project–Informational Leaflet No. 12. 12 pp.

Scott, W.B. and E.J. Crossman, 1973. *Freshwater fishes of Canada*. Bull. Fish. Res. Board Can. 184:1-966.

Steinhart, G.B. 2004. *Exploring factors affecting smallmouth bass nest success and reproductive behavior*. Ph. D. Dissertation. Department of Evolution, Ecology, and Organismal Biology. The Ohio State University.

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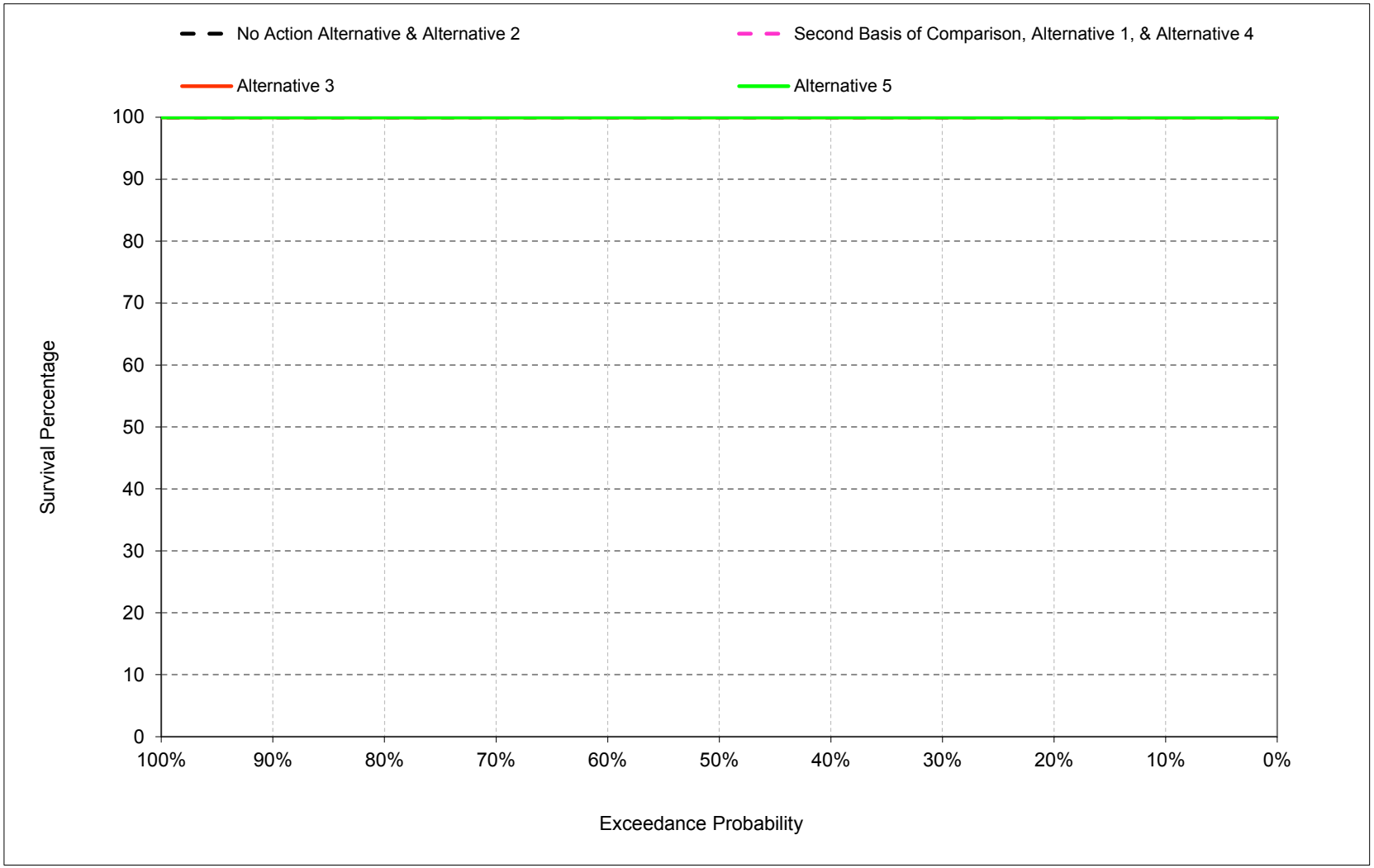
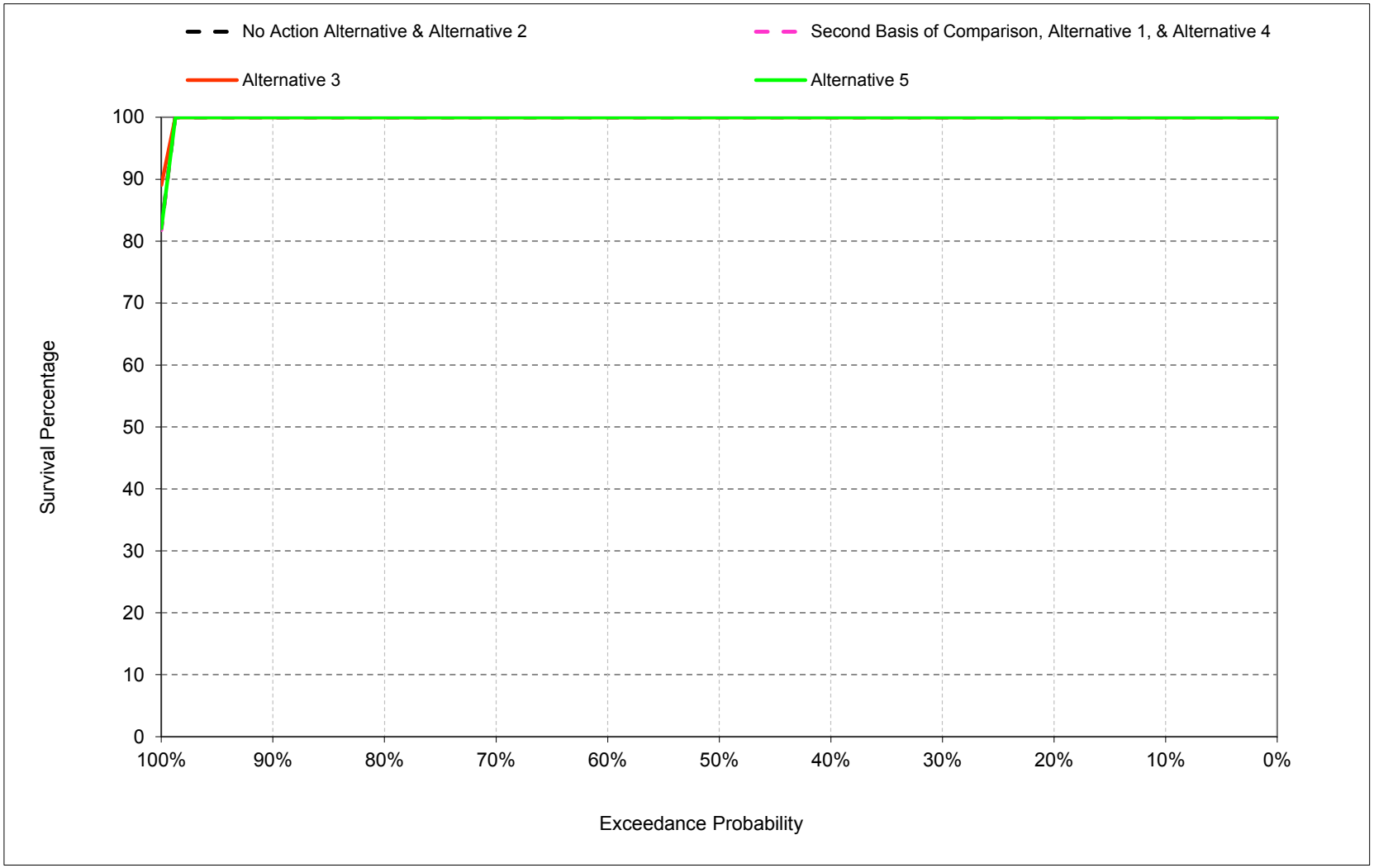
B.1. Trinity Large Mouth Bass Survival Percentage

Figure B-1-1. Trinity Large Mouth Bass Nest Survival Percentage, March



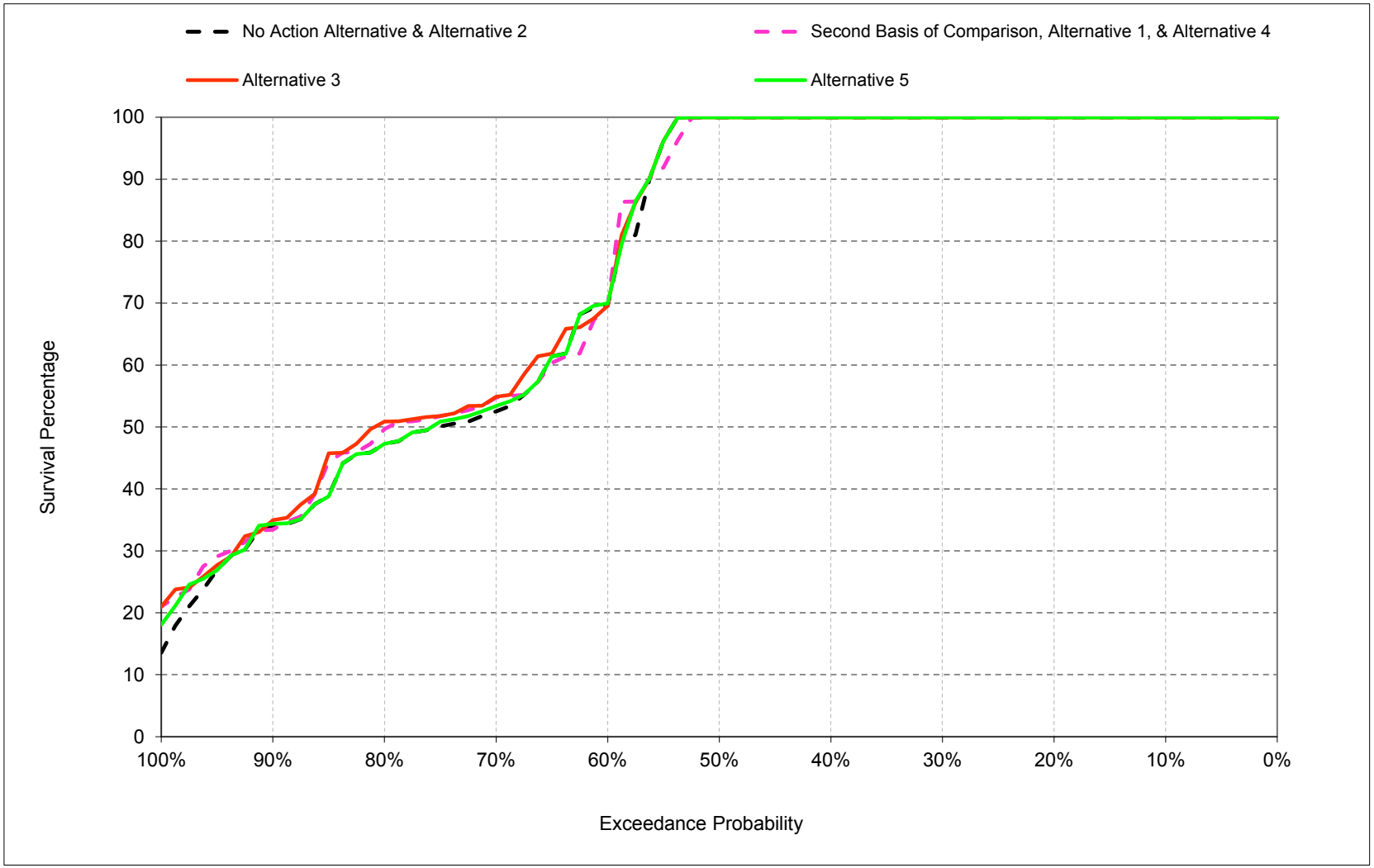
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-1-2. Trinity Large Mouth Bass Nest Survival Percentage, April



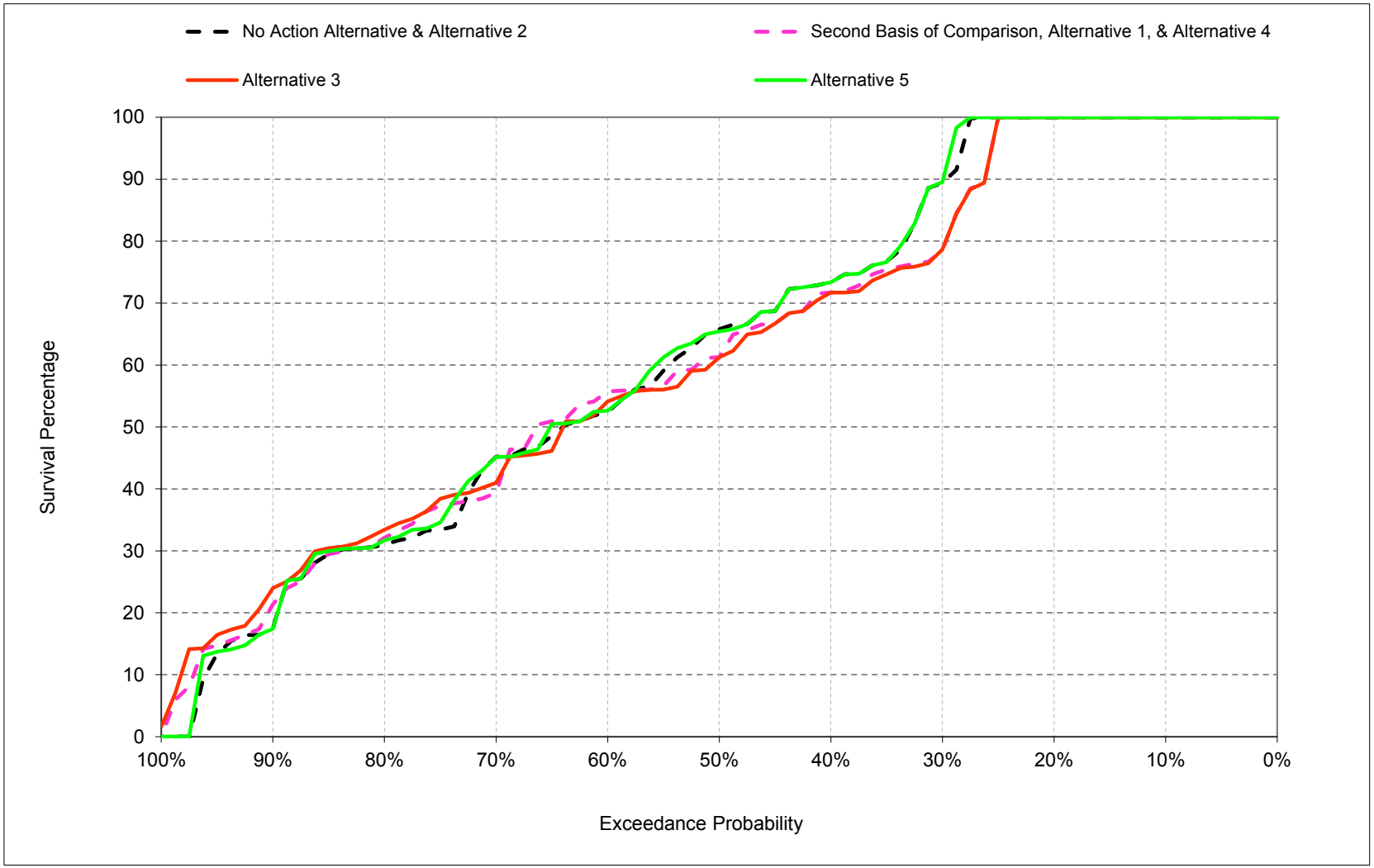
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-1-3. Trinity Large Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-1-4. Trinity Large Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-1-1. Trinity Large Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	89
40%	100	100	100	73
50%	100	100	100	65
60%	100	100	69	52
70%	100	100	52	44
80%	100	100	46	31
90%	100	100	33	17
Long Term				
Full Simulation Period[b]	100	100	76	62
Water Year Types[c]				
Wet (32%)	99	100	87	72
Above Normal (16%)	100	100	84	52
Below Normal (13%)	100	100	64	42
Dry (24%)	100	100	67	58
Critical (15%)	100	97	67	75

Alternative 1

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	78
40%	100	100	100	72
50%	100	100	100	61
60%	100	100	68	55
70%	100	100	54	39
80%	100	100	48	31
90%	100	100	33	18
Long Term				
Full Simulation Period[b]	100	99	76	61
Water Year Types[c]				
Wet (32%)	99	100	87	71
Above Normal (16%)	100	100	85	51
Below Normal (13%)	100	100	66	46
Dry (24%)	100	100	68	59
Critical (15%)	100	95	69	69

Alternative 1 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-11
40%	0	0	0	-2
50%	0	0	0	-4
60%	0	0	-1	3
70%	0	0	2	-5
80%	0	0	2	0
90%	0	0	0	1
Long Term				
Full Simulation Period[b]	0	0	1	-1
Water Year Types[c]				
Wet (32%)	0	0	0	-1
Above Normal (16%)	0	0	1	-1
Below Normal (13%)	0	0	1	4
Dry (24%)	0	0	0	0
Critical (15%)	0	-2	1	-6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-1-2. Trinity Large Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	89
40%	100	100	100	73
50%	100	100	100	65
60%	100	100	69	52
70%	100	100	52	44
80%	100	100	46	31
90%	100	100	33	17
Long Term				
Full Simulation Period[b]	100	100	76	62
Water Year Types[c]				
Wet (32%)	99	100	87	72
Above Normal (16%)	100	100	84	52
Below Normal (13%)	100	100	64	42
Dry (24%)	100	100	67	58
Critical (15%)	100	97	67	75

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	78
40%	100	100	100	71
50%	100	100	100	60
60%	100	100	68	53
70%	100	100	54	40
80%	100	100	50	32
90%	100	100	33	21
Long Term				
Full Simulation Period[b]	100	100	77	61
Water Year Types[c]				
Wet (32%)	99	100	87	71
Above Normal (16%)	100	100	86	52
Below Normal (13%)	100	100	65	42
Dry (24%)	100	100	68	60
Critical (15%)	100	98	70	70

Alternative 3 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-11
40%	0	0	0	-2
50%	0	0	0	-5
60%	0	0	-1	1
70%	0	0	2	-3
80%	0	0	4	2
90%	0	0	0	4
Long Term				
Full Simulation Period[b]	0	0	1	-1
Water Year Types[c]				
Wet (32%)	0	0	0	-1
Above Normal (16%)	0	0	2	0
Below Normal (13%)	0	0	1	0
Dry (24%)	0	0	1	2
Critical (15%)	0	1	2	-5

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-1-3. Trinity Large Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	89
40%	100	100	100	73
50%	100	100	100	65
60%	100	100	69	52
70%	100	100	52	44
80%	100	100	46	31
90%	100	100	33	17
Long Term				
Full Simulation Period[b]	100	100	76	62
Water Year Types[c]				
Wet (32%)	99	100	87	72
Above Normal (16%)	100	100	84	52
Below Normal (13%)	100	100	64	42
Dry (24%)	100	100	67	58
Critical (15%)	100	97	67	75

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	89
40%	100	100	100	73
50%	100	100	100	65
60%	100	100	70	53
70%	100	100	53	44
80%	100	100	46	31
90%	100	100	34	17
Long Term				
Full Simulation Period[b]	100	100	76	62
Water Year Types[c]				
Wet (32%)	99	100	87	72
Above Normal (16%)	100	100	84	53
Below Normal (13%)	100	100	65	42
Dry (24%)	100	100	68	58
Critical (15%)	100	97	67	78

Alternative 5 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	1	0
80%	0	0	0	0
90%	0	0	1	0
Long Term				
Full Simulation Period[b]	0	0	0	0
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	1	0
Dry (24%)	0	0	0	-1
Critical (15%)	0	0	0	3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-1-4. Trinity Large Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	78
40%	100	100	100	72
50%	100	100	100	61
60%	100	100	68	55
70%	100	100	54	39
80%	100	100	48	31
90%	100	100	33	18
Long Term				
Full Simulation Period[b]	100	99	76	61
Water Year Types[c]				
Wet (32%)	99	100	87	71
Above Normal (16%)	100	100	85	51
Below Normal (13%)	100	100	66	46
Dry (24%)	100	100	68	59
Critical (15%)	100	95	69	69

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	89
40%	100	100	100	73
50%	100	100	100	65
60%	100	100	69	52
70%	100	100	52	44
80%	100	100	46	31
90%	100	100	33	17
Long Term				
Full Simulation Period[b]	100	100	76	62
Water Year Types[c]				
Wet (32%)	99	100	87	72
Above Normal (16%)	100	100	84	52
Below Normal (13%)	100	100	64	42
Dry (24%)	100	100	67	58
Critical (15%)	100	97	67	75

No Action Alternative minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	11
40%	0	0	0	2
50%	0	0	0	4
60%	0	0	1	-3
70%	0	0	-2	5
80%	0	0	-2	0
90%	0	0	0	-1
Long Term				
Full Simulation Period[b]	0	0	-1	1
Water Year Types[c]				
Wet (32%)	0	0	0	1
Above Normal (16%)	0	0	-1	1
Below Normal (13%)	0	0	-1	-4
Dry (24%)	0	0	0	0
Critical (15%)	0	2	-1	6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-1-5. Trinity Large Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	78
40%	100	100	100	72
50%	100	100	100	61
60%	100	100	68	55
70%	100	100	54	39
80%	100	100	48	31
90%	100	100	33	18
Long Term				
Full Simulation Period[b]	100	99	76	61
Water Year Types[c]				
Wet (32%)	99	100	87	71
Above Normal (16%)	100	100	85	51
Below Normal (13%)	100	100	66	46
Dry (24%)	100	100	68	59
Critical (15%)	100	95	69	69

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	78
40%	100	100	100	71
50%	100	100	100	60
60%	100	100	68	53
70%	100	100	54	40
80%	100	100	50	32
90%	100	100	33	21
Long Term				
Full Simulation Period[b]	100	100	77	61
Water Year Types[c]				
Wet (32%)	99	100	87	71
Above Normal (16%)	100	100	86	52
Below Normal (13%)	100	100	65	42
Dry (24%)	100	100	68	60
Critical (15%)	100	98	70	70

Alternative 3 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	-1
60%	0	0	0	-2
70%	0	0	0	2
80%	0	0	2	2
90%	0	0	0	3
Long Term				
Full Simulation Period[b]	0	0	0	0
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	1	1
Below Normal (13%)	0	0	0	-4
Dry (24%)	0	0	0	1
Critical (15%)	0	3	1	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-1-6. Trinity Large Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	78
40%	100	100	100	72
50%	100	100	100	61
60%	100	100	68	55
70%	100	100	54	39
80%	100	100	48	31
90%	100	100	33	18
Long Term				
Full Simulation Period[b]	100	99	76	61
Water Year Types[c]				
Wet (32%)	99	100	87	71
Above Normal (16%)	100	100	85	51
Below Normal (13%)	100	100	66	46
Dry (24%)	100	100	68	59
Critical (15%)	100	95	69	69

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	89
40%	100	100	100	73
50%	100	100	100	65
60%	100	100	70	53
70%	100	100	53	44
80%	100	100	46	31
90%	100	100	34	17
Long Term				
Full Simulation Period[b]	100	100	76	62
Water Year Types[c]				
Wet (32%)	99	100	87	72
Above Normal (16%)	100	100	84	53
Below Normal (13%)	100	100	65	42
Dry (24%)	100	100	68	58
Critical (15%)	100	97	67	78

Alternative 5 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	11
40%	0	0	0	2
50%	0	0	0	4
60%	0	0	2	-2
70%	0	0	-1	5
80%	0	0	-2	0
90%	0	0	1	-1
Long Term				
Full Simulation Period[b]	0	0	0	1
Water Year Types[c]				
Wet (32%)	0	0	0	1
Above Normal (16%)	0	0	0	2
Below Normal (13%)	0	0	0	-4
Dry (24%)	0	0	0	-1
Critical (15%)	0	2	-1	9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

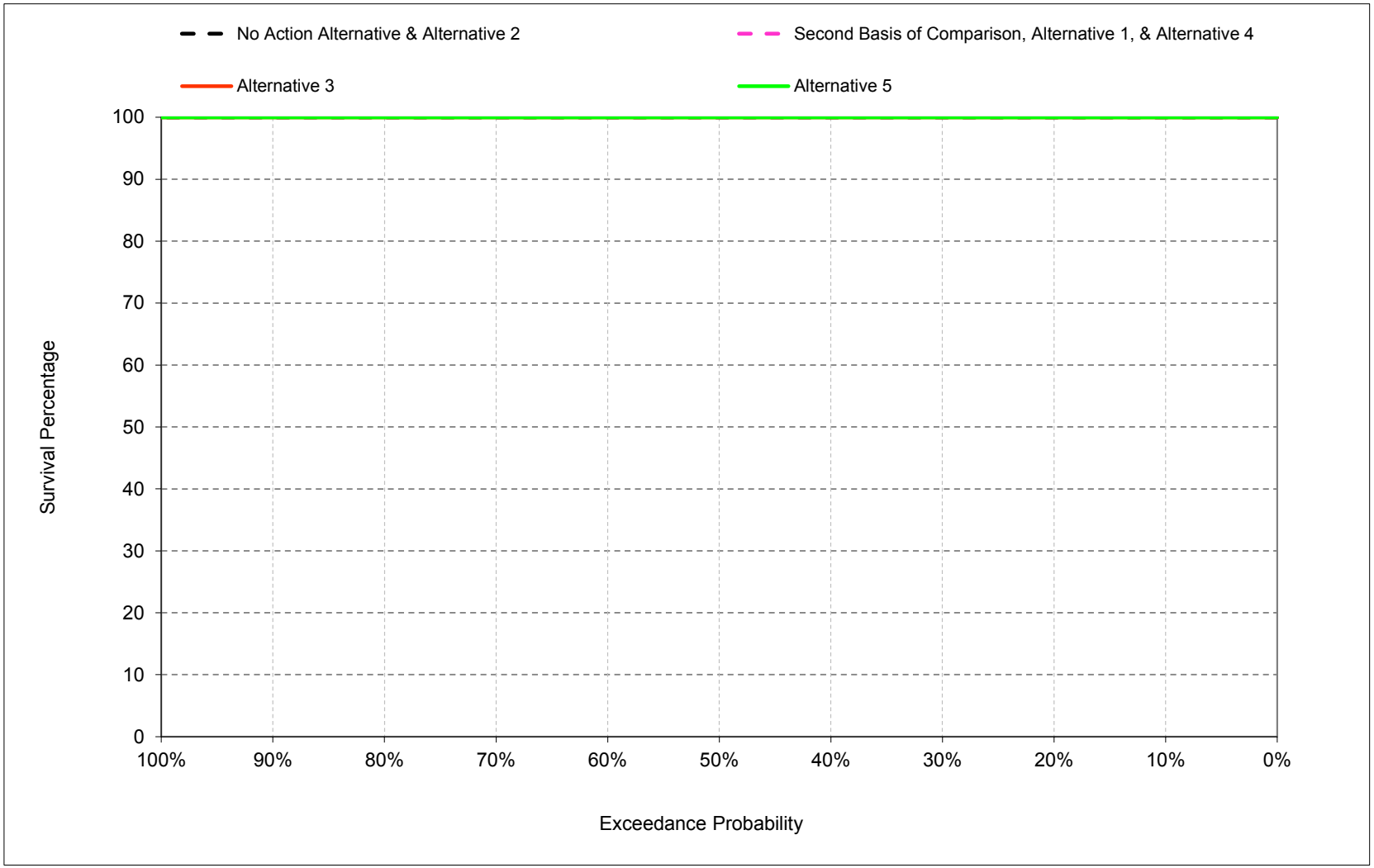
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

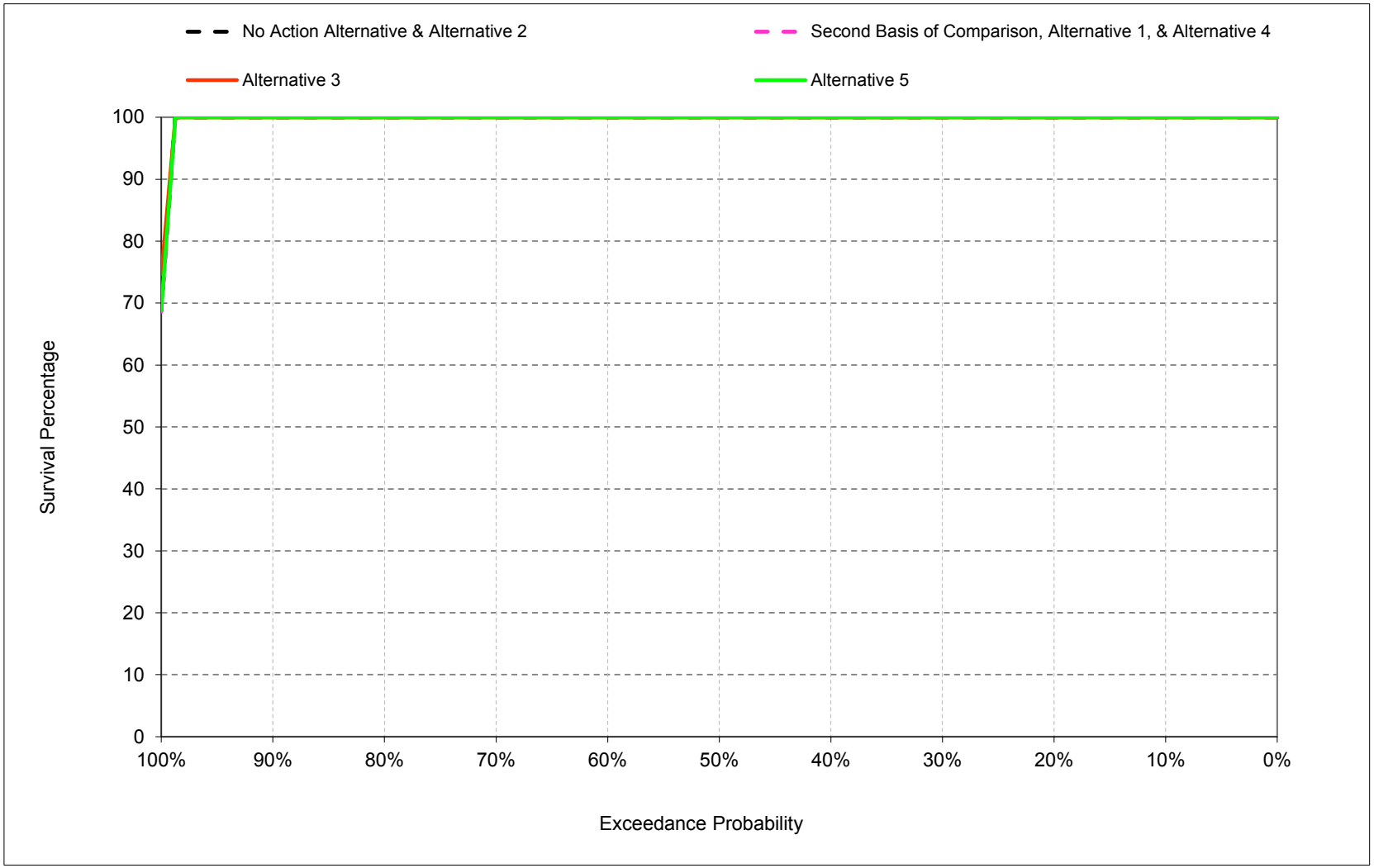
B.2. Trinity Small Mouth Bass Survival Percentage

Figure B-2-1. Trinity Small Mouth Bass Nest Survival Percentage, March



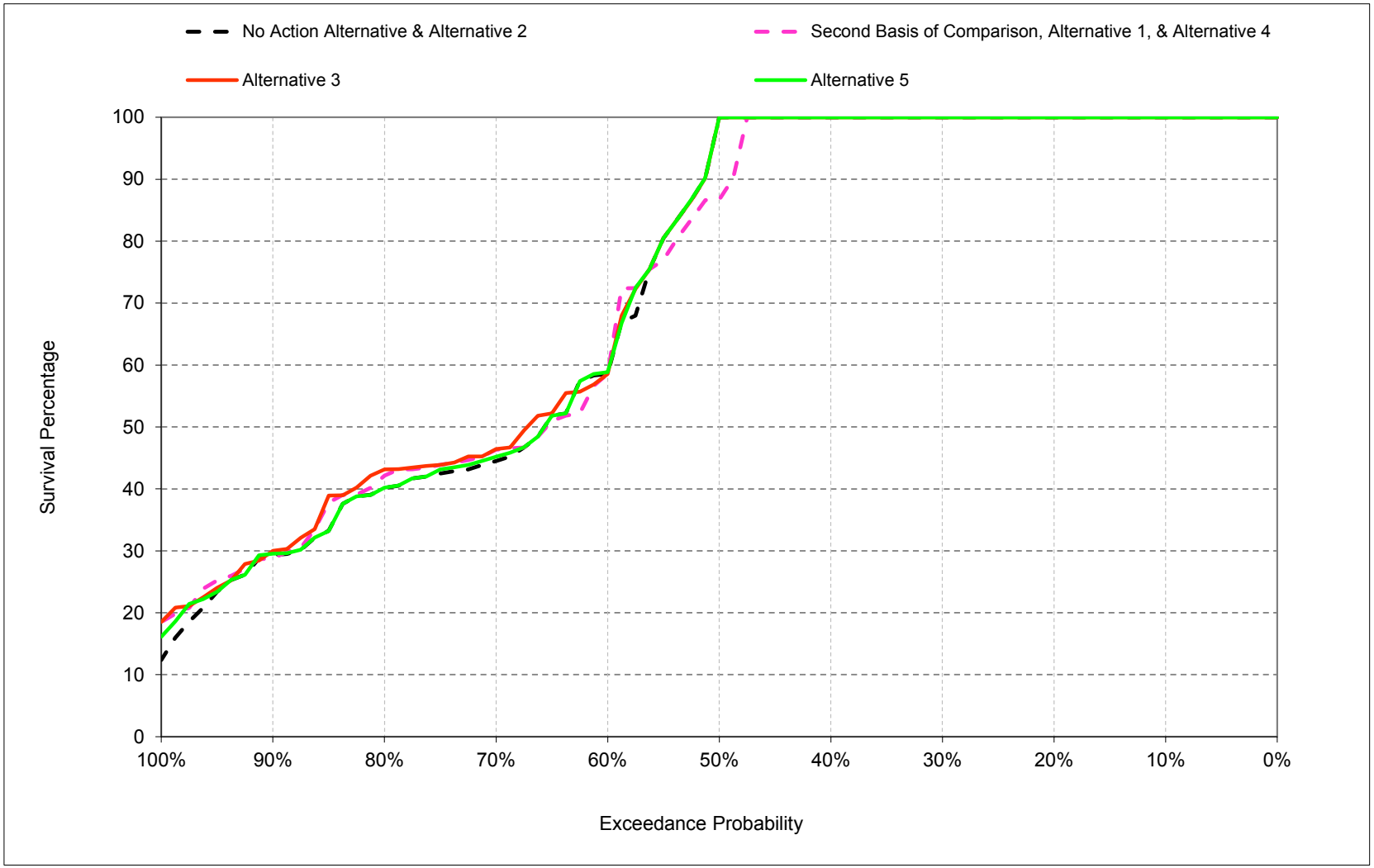
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-2-2. Trinity Small Mouth Bass Nest Survival Percentage, April



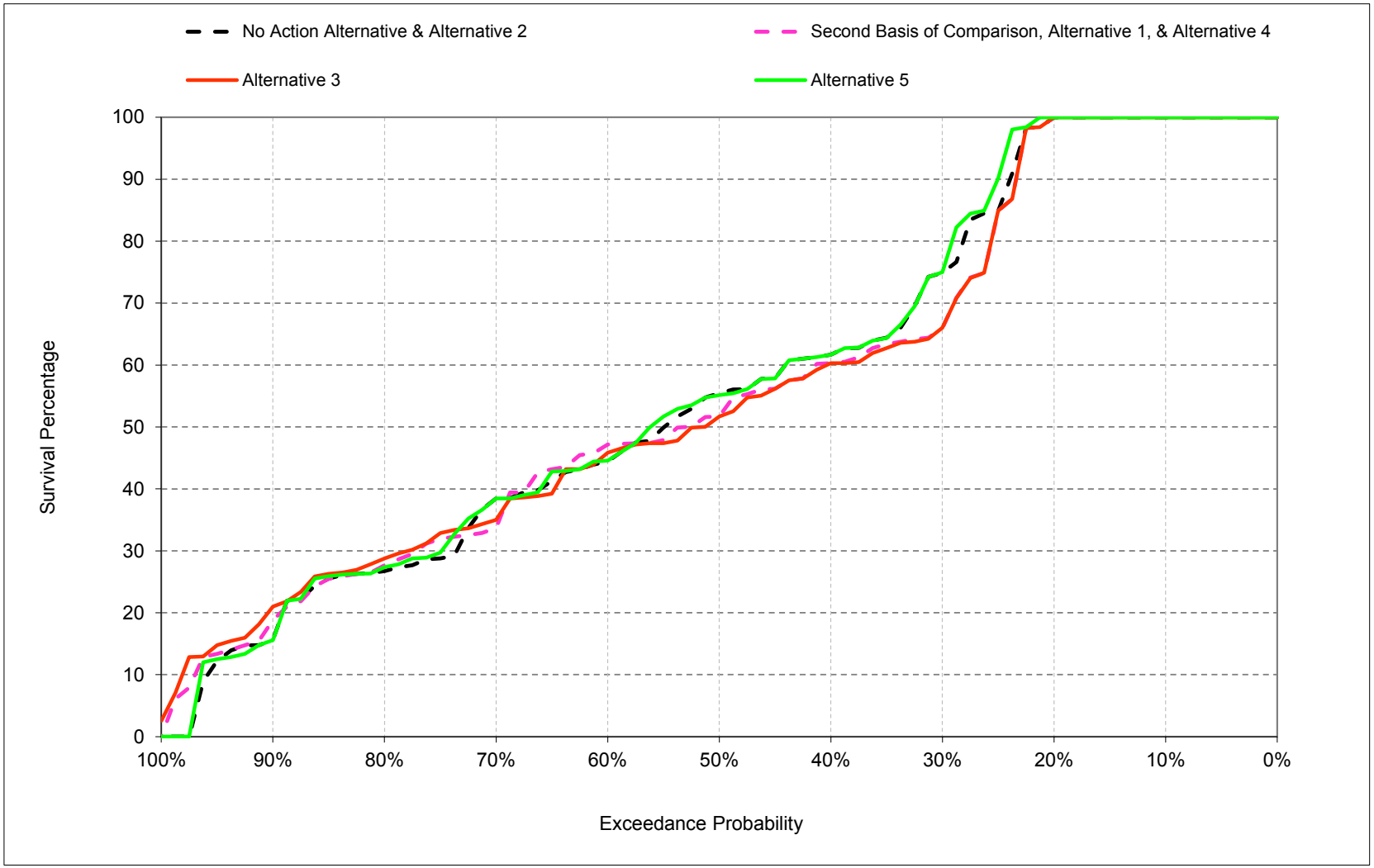
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-2-3. Trinity Small Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-2-4. Trinity Small Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-2-1. Trinity Small Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	75
40%	100	100	100	62
50%	100	100	95	55
60%	100	100	58	44
70%	100	100	44	37
80%	100	100	39	26
90%	100	100	29	15
Long Term				
Full Simulation Period[b]	100	99	72	56
Water Year Types[c]				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	80	47
Below Normal (13%)	100	100	59	37
Dry (24%)	100	100	63	51
Critical (15%)	100	95	62	70

Alternative 1

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	65
40%	100	100	100	60
50%	100	100	87	52
60%	100	100	57	46
70%	100	100	46	33
80%	100	100	41	27
90%	100	100	29	16
Long Term				
Full Simulation Period[b]	100	99	72	55
Water Year Types[c]				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	81	46
Below Normal (13%)	100	100	60	41
Dry (24%)	100	100	63	52
Critical (15%)	100	93	62	63

Alternative 1 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-9
40%	0	0	0	-1
50%	0	0	-8	-3
60%	0	0	-1	2
70%	0	0	1	-4
80%	0	0	1	0
90%	0	0	0	1
Long Term				
Full Simulation Period[b]	0	0	0	-1
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	1	-1
Below Normal (13%)	0	0	1	3
Dry (24%)	0	0	0	1
Critical (15%)	0	-2	0	-6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-2-2. Trinity Small Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	75
40%	100	100	100	62
50%	100	100	95	55
60%	100	100	58	44
70%	100	100	44	37
80%	100	100	39	26
90%	100	100	29	15
Long Term				
Full Simulation Period[b]	100	99	72	56
Water Year Types[c]				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	80	47
Below Normal (13%)	100	100	59	37
Dry (24%)	100	100	63	51
Critical (15%)	100	95	62	70

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	65
40%	100	100	100	60
50%	100	100	95	51
60%	100	100	58	45
70%	100	100	46	35
80%	100	100	42	28
90%	100	100	29	18
Long Term				
Full Simulation Period[b]	100	99	73	56
Water Year Types[c]				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	82	47
Below Normal (13%)	100	100	60	37
Dry (24%)	100	100	64	53
Critical (15%)	100	95	64	64

Alternative 3 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-9
40%	0	0	0	-2
50%	0	0	0	-4
60%	0	0	-1	1
70%	0	0	2	-3
80%	0	0	3	2
90%	0	0	0	4
Long Term				
Full Simulation Period[b]	0	0	1	-1
Water Year Types[c]				
Wet (32%)	0	0	0	-1
Above Normal (16%)	0	0	1	0
Below Normal (13%)	0	0	1	0
Dry (24%)	0	0	1	2
Critical (15%)	0	0	2	-5

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-2-3. Trinity Small Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	75
40%	100	100	100	62
50%	100	100	95	55
60%	100	100	58	44
70%	100	100	44	37
80%	100	100	39	26
90%	100	100	29	15
Long Term				
Full Simulation Period[b]	100	99	72	56
Water Year Types[c]				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	80	47
Below Normal (13%)	100	100	59	37
Dry (24%)	100	100	63	51
Critical (15%)	100	95	62	70

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	75
40%	100	100	100	62
50%	100	100	95	55
60%	100	100	59	44
70%	100	100	45	37
80%	100	100	39	27
90%	100	100	29	15
Long Term				
Full Simulation Period[b]	100	99	72	57
Water Year Types[c]				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	81	47
Below Normal (13%)	100	100	60	38
Dry (24%)	100	100	64	51
Critical (15%)	100	95	62	72

Alternative 5 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	1	0
80%	0	0	0	0
90%	0	0	1	0
Long Term				
Full Simulation Period[b]	0	0	0	0
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	1	0
Dry (24%)	0	0	0	0
Critical (15%)	0	0	0	2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-2-4. Trinity Small Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	65
40%	100	100	100	60
50%	100	100	87	52
60%	100	100	57	46
70%	100	100	46	33
80%	100	100	41	27
90%	100	100	29	16
Long Term				
Full Simulation Period[b]	100	99	72	55
Water Year Types[c]				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	81	46
Below Normal (13%)	100	100	60	41
Dry (24%)	100	100	63	52
Critical (15%)	100	93	62	63

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	75
40%	100	100	100	62
50%	100	100	95	55
60%	100	100	58	44
70%	100	100	44	37
80%	100	100	39	26
90%	100	100	29	15
Long Term				
Full Simulation Period[b]	100	99	72	56
Water Year Types[c]				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	80	47
Below Normal (13%)	100	100	59	37
Dry (24%)	100	100	63	51
Critical (15%)	100	95	62	70

No Action Alternative minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	9
40%	0	0	0	1
50%	0	0	8	3
60%	0	0	1	-2
70%	0	0	-1	4
80%	0	0	-1	0
90%	0	0	0	-1
Long Term				
Full Simulation Period[b]	0	0	0	1
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	-1	1
Below Normal (13%)	0	0	-1	-3
Dry (24%)	0	0	0	-1
Critical (15%)	0	2	0	6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-2-5. Trinity Small Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	65
40%	100	100	100	60
50%	100	100	87	52
60%	100	100	57	46
70%	100	100	46	33
80%	100	100	41	27
90%	100	100	29	16
Long Term				
Full Simulation Period[b]	100	99	72	55
Water Year Types[c]				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	81	46
Below Normal (13%)	100	100	60	41
Dry (24%)	100	100	63	52
Critical (15%)	100	93	62	63

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	65
40%	100	100	100	60
50%	100	100	95	51
60%	100	100	58	45
70%	100	100	46	35
80%	100	100	42	28
90%	100	100	29	18
Long Term				
Full Simulation Period[b]	100	99	73	56
Water Year Types[c]				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	82	47
Below Normal (13%)	100	100	60	37
Dry (24%)	100	100	64	53
Critical (15%)	100	95	64	64

Alternative 3 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	8	-1
60%	0	0	0	-2
70%	0	0	0	1
80%	0	0	2	1
90%	0	0	0	3
Long Term				
Full Simulation Period[b]	0	0	1	0
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	1	1
Below Normal (13%)	0	0	0	-3
Dry (24%)	0	0	1	1
Critical (15%)	0	2	2	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-2-6. Trinity Small Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	65
40%	100	100	100	60
50%	100	100	87	52
60%	100	100	57	46
70%	100	100	46	33
80%	100	100	41	27
90%	100	100	29	16
Long Term				
Full Simulation Period[b]	100	99	72	55
Water Year Types[c]				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	81	46
Below Normal (13%)	100	100	60	41
Dry (24%)	100	100	63	52
Critical (15%)	100	93	62	63

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	75
40%	100	100	100	62
50%	100	100	95	55
60%	100	100	59	44
70%	100	100	45	37
80%	100	100	39	27
90%	100	100	29	15
Long Term				
Full Simulation Period[b]	100	99	72	57
Water Year Types[c]				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	81	47
Below Normal (13%)	100	100	60	38
Dry (24%)	100	100	64	51
Critical (15%)	100	95	62	72

Alternative 5 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	9
40%	0	0	0	1
50%	0	0	8	3
60%	0	0	1	-2
70%	0	0	-1	4
80%	0	0	-1	0
90%	0	0	1	-1
Long Term				
Full Simulation Period[b]	0	0	0	1
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	1
Below Normal (13%)	0	0	0	-3
Dry (24%)	0	0	1	-1
Critical (15%)	0	2	0	9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

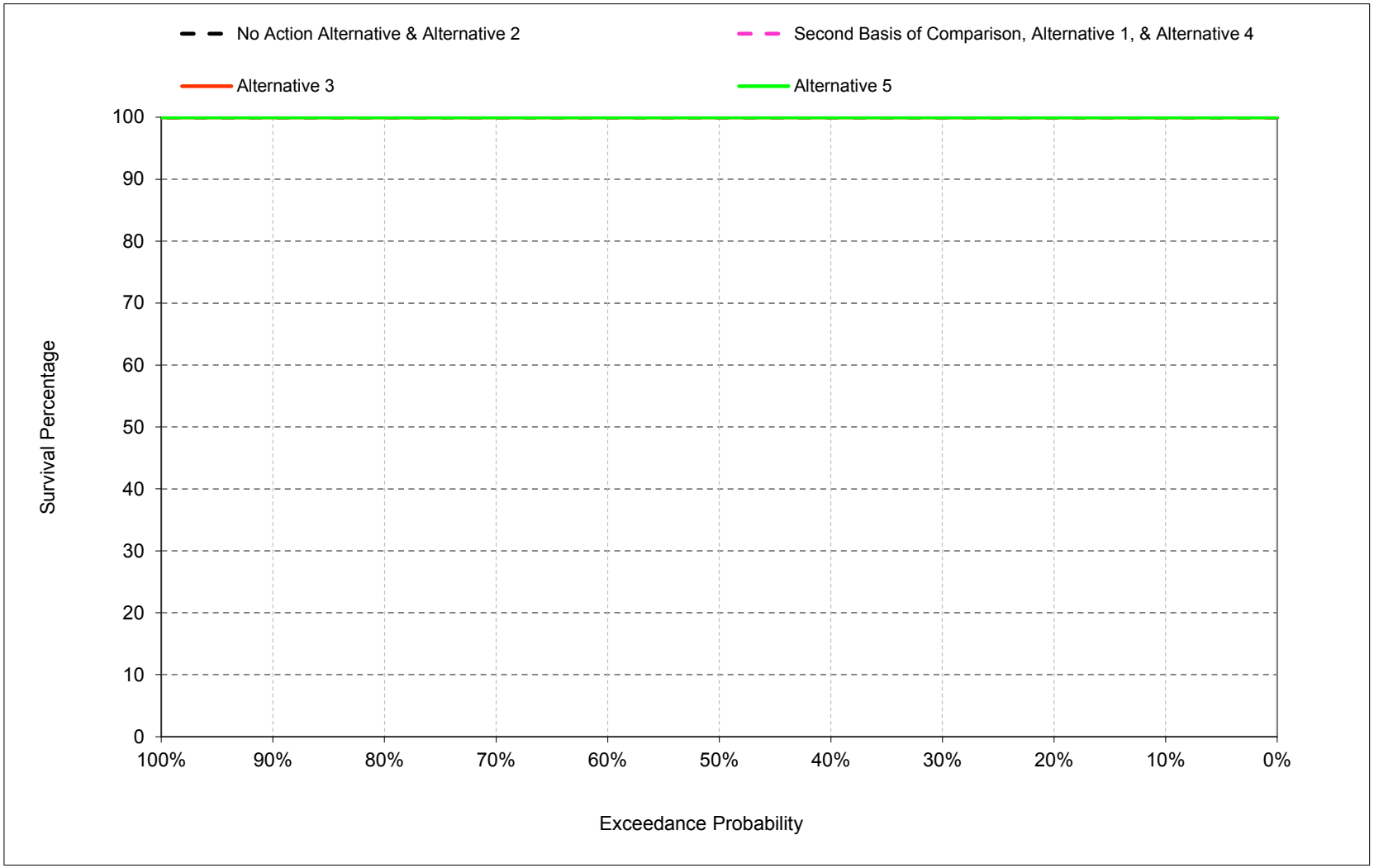
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

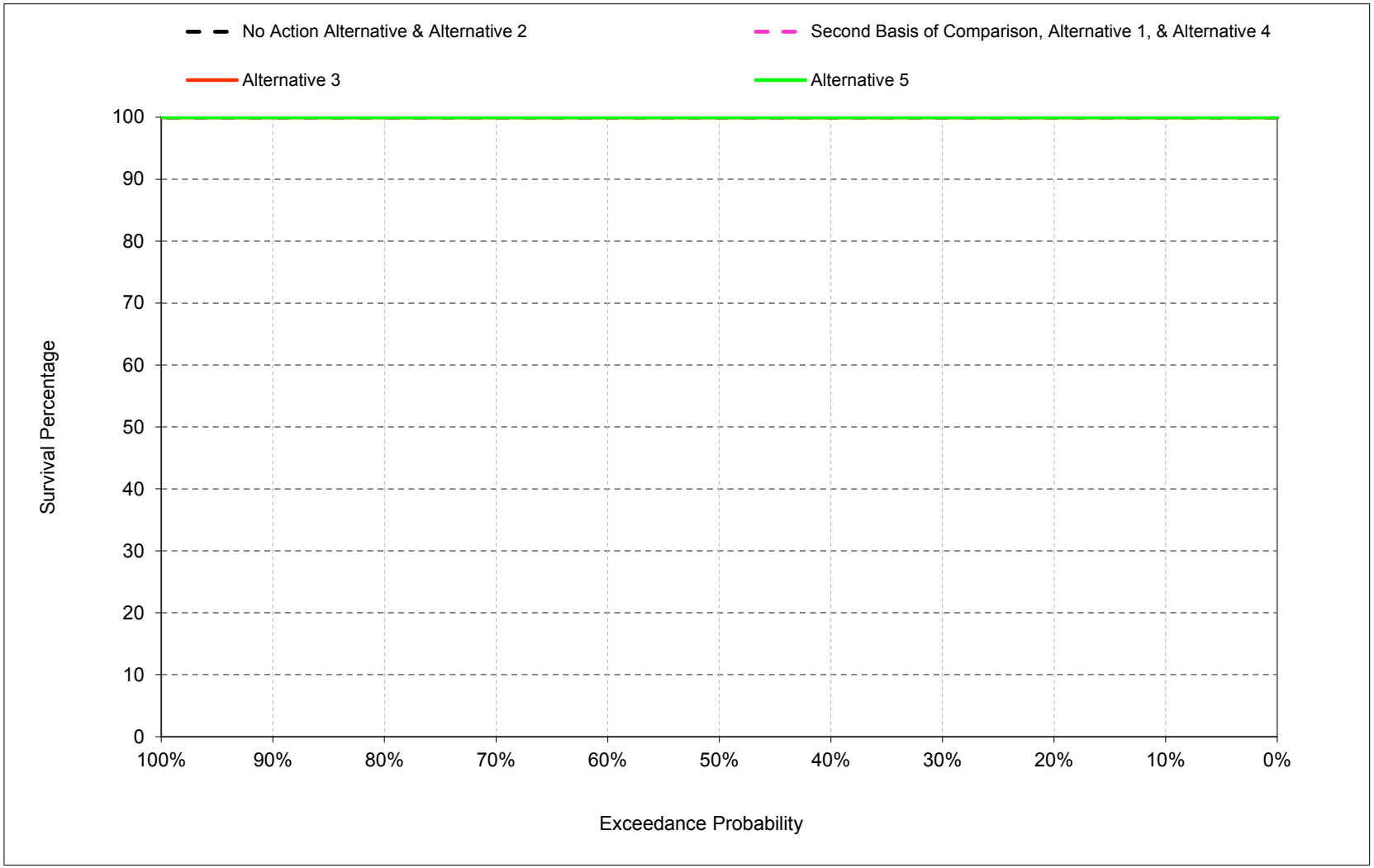
B.3. Trinity Spotted Bass Survival Percentage

Figure B-3-1. Trinity Spotted Bass Nest Survival Percentage, March



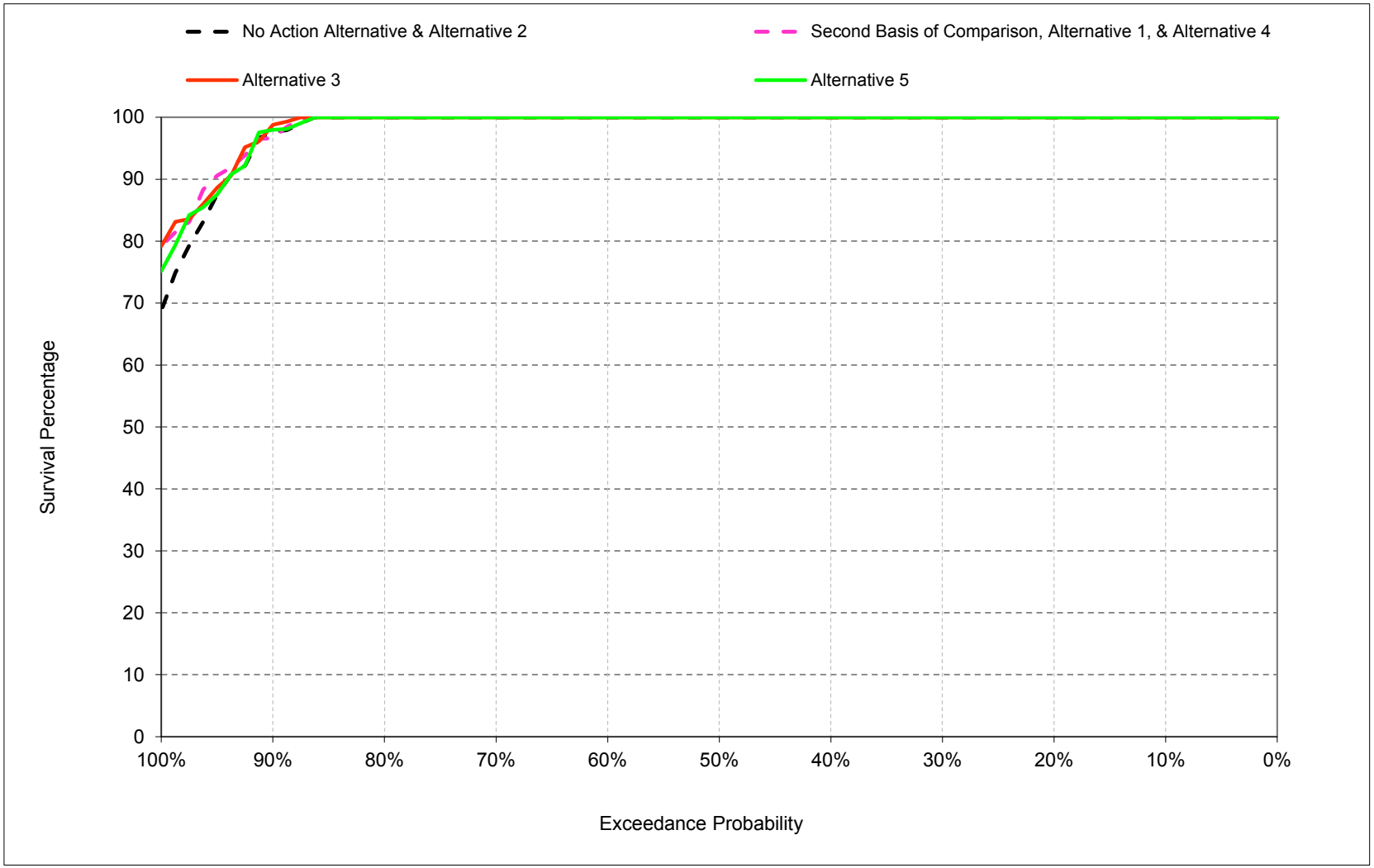
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-3-2. Trinity Spotted Bass Nest Survival Percentage, April



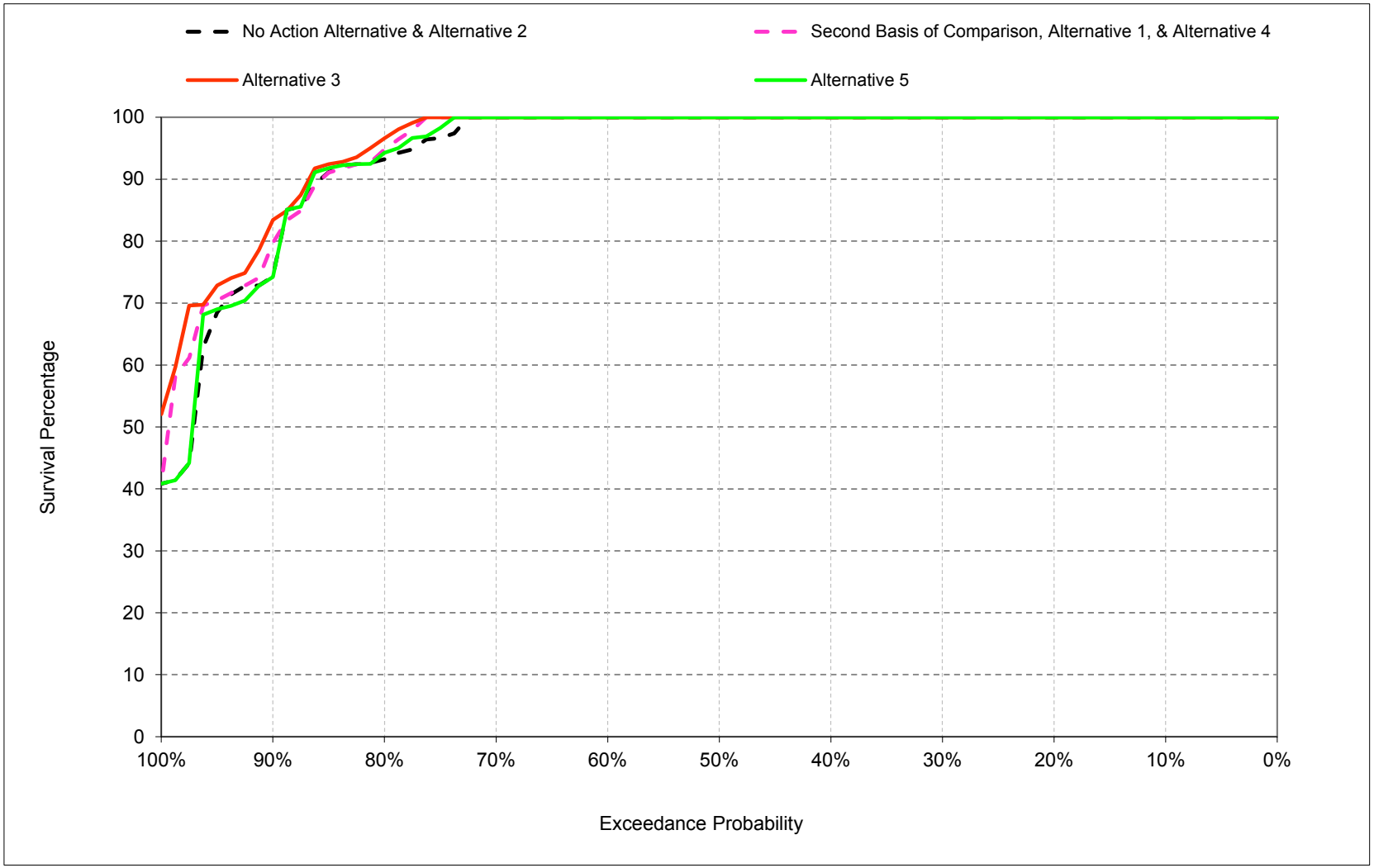
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-3-3. Trinity Spotted Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-3-4. Trinity Spotted Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-3-1. Trinity Spotted Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	97	73
Long Term				
Full Simulation Period[b]	100	100	98	94
Water Year Types[c]				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	93
Below Normal (13%)	100	100	96	89
Dry (24%)	100	100	96	90
Critical (15%)	100	100	99	99

Alternative 1

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	97	75
Long Term				
Full Simulation Period[b]	100	100	98	95
Water Year Types[c]				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	91
Below Normal (13%)	100	100	98	89
Dry (24%)	100	100	97	96
Critical (15%)	100	100	99	99

Alternative 1 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	0
90%	0	0	0	2
Long Term				
Full Simulation Period[b]	0	0	0	1
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	-2
Below Normal (13%)	0	0	2	-1
Dry (24%)	0	0	1	5
Critical (15%)	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-3-2. Trinity Spotted Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	97	73
Long Term				
Full Simulation Period[b]	100	100	98	94
Water Year Types[c]				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	93
Below Normal (13%)	100	100	96	89
Dry (24%)	100	100	96	90
Critical (15%)	100	100	99	99

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	95
90%	100	100	96	79
Long Term				
Full Simulation Period[b]	100	100	98	95
Water Year Types[c]				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	93
Below Normal (13%)	100	100	97	90
Dry (24%)	100	100	97	96
Critical (15%)	100	100	100	100

Alternative 3 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	3
90%	0	0	0	6
Long Term				
Full Simulation Period[b]	0	0	0	1
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	2	1
Dry (24%)	0	0	1	6
Critical (15%)	0	0	0	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-3-3. Trinity Spotted Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	97	73
Long Term				
Full Simulation Period[b]	100	100	98	94
Water Year Types[c]				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	93
Below Normal (13%)	100	100	96	89
Dry (24%)	100	100	96	90
Critical (15%)	100	100	99	99

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	98	73
Long Term				
Full Simulation Period[b]	100	100	98	94
Water Year Types[c]				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	94
Below Normal (13%)	100	100	97	89
Dry (24%)	100	100	96	90
Critical (15%)	100	100	99	99

Alternative 5 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	0
90%	0	0	1	0
Long Term				
Full Simulation Period[b]	0	0	0	0
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	2	0
Dry (24%)	0	0	0	0
Critical (15%)	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-3-4. Trinity Spotted Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	97	75
Long Term				
Full Simulation Period[b]	100	100	98	95
Water Year Types[c]				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	91
Below Normal (13%)	100	100	98	89
Dry (24%)	100	100	97	96
Critical (15%)	100	100	99	99

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	97	73
Long Term				
Full Simulation Period[b]	100	100	98	94
Water Year Types[c]				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	93
Below Normal (13%)	100	100	96	89
Dry (24%)	100	100	96	90
Critical (15%)	100	100	99	99

No Action Alternative minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	**0**
90%	0	0	0	**-2**
Long Term				
Full Simulation Period[b]	0	0	**0**	**-1**
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	2
Below Normal (13%)	0	0	**-2**	1
Dry (24%)	0	0	**-1**	**-5**
Critical (15%)	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-3-5. Trinity Spotted Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	97	75
Long Term				
Full Simulation Period[b]	100	100	98	95
Water Year Types[c]				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	91
Below Normal (13%)	100	100	98	89
Dry (24%)	100	100	97	96
Critical (15%)	100	100	99	99

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	95
90%	100	100	96	79
Long Term				
Full Simulation Period[b]	100	100	98	95
Water Year Types[c]				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	93
Below Normal (13%)	100	100	97	90
Dry (24%)	100	100	97	96
Critical (15%)	100	100	100	100

Alternative 3 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	2
90%	0	0	0	4
Long Term				
Full Simulation Period[b]	0	0	0	1
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	2
Below Normal (13%)	0	0	-1	1
Dry (24%)	0	0	0	0
Critical (15%)	0	0	0	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-3-6. Trinity Spotted Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	97	75
Long Term				
Full Simulation Period[b]	100	100	98	95
Water Year Types[c]				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	91
Below Normal (13%)	100	100	98	89
Dry (24%)	100	100	97	96
Critical (15%)	100	100	99	99

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	98	73
Long Term				
Full Simulation Period[b]	100	100	98	94
Water Year Types[c]				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	94
Below Normal (13%)	100	100	97	89
Dry (24%)	100	100	96	90
Critical (15%)	100	100	99	99

Alternative 5 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	**0**
90%	0	0	1	**-2**
Long Term				
Full Simulation Period[b]	0	0	**0**	**-1**
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	3
Below Normal (13%)	0	0	**-1**	1
Dry (24%)	0	0	**-1**	**-5**
Critical (15%)	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

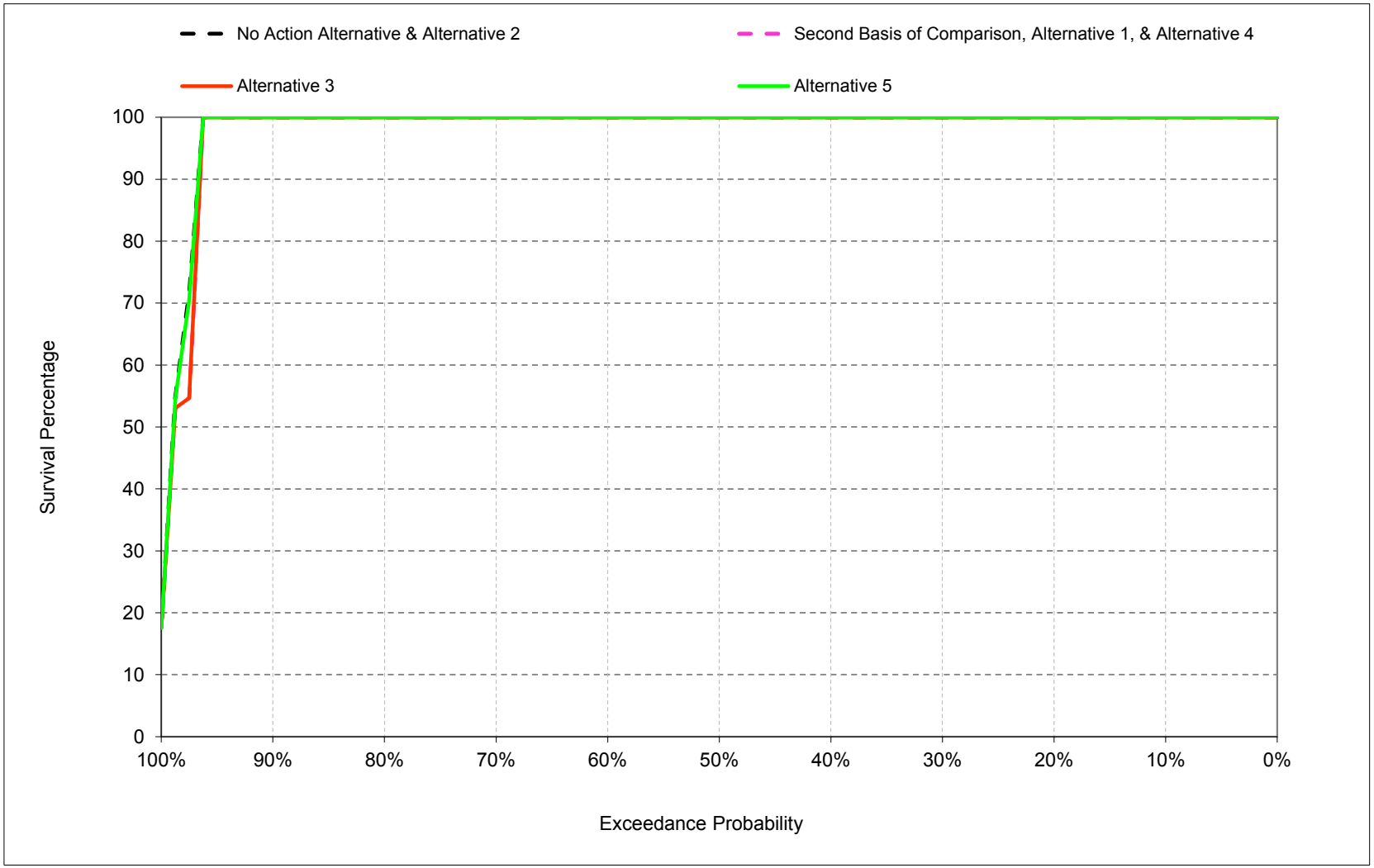
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

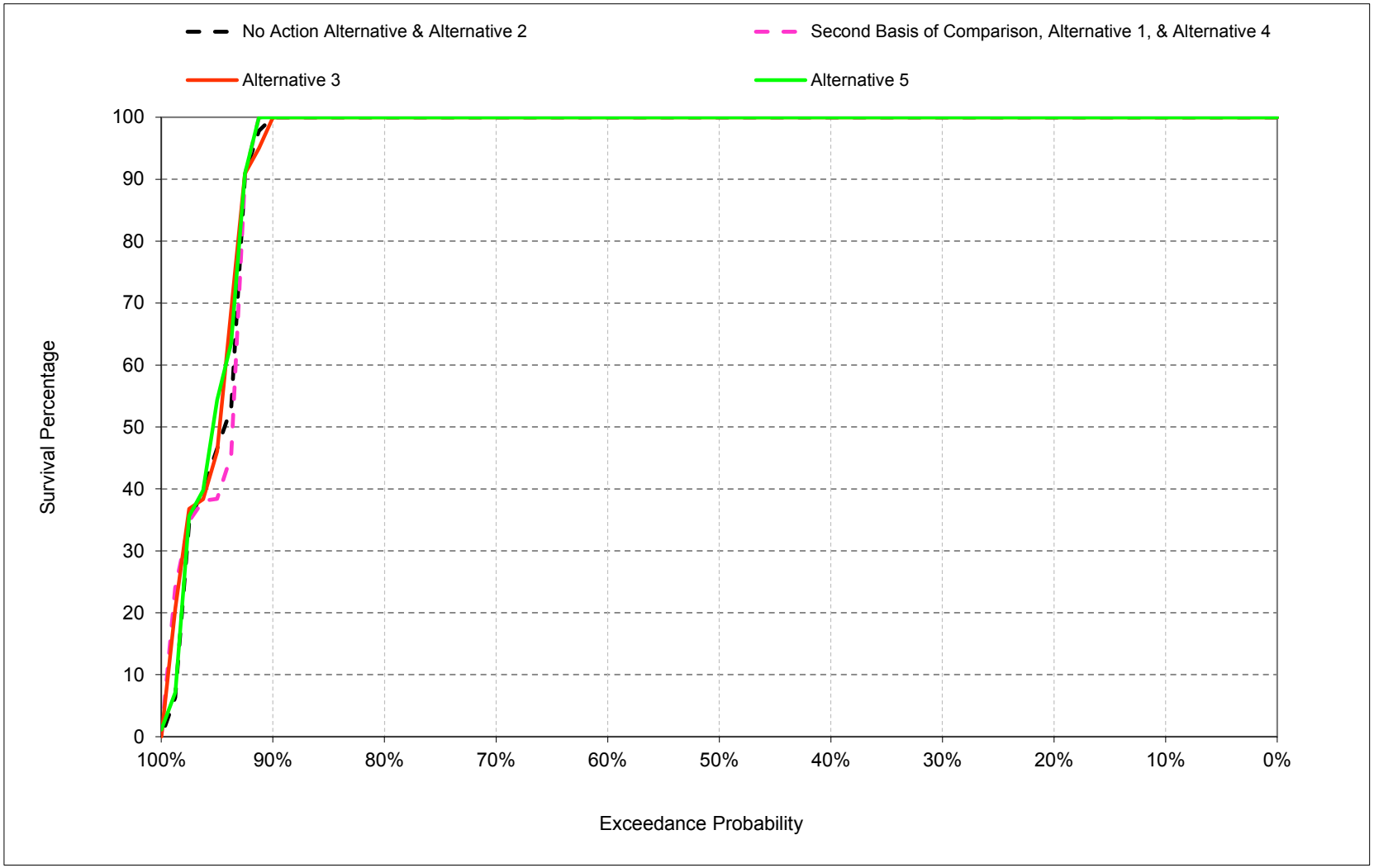
B.4. Shasta Large Mouth Bass Survival Percentage

Figure B-4-1. Shasta Large Mouth Bass Nest Survival Percentage, March



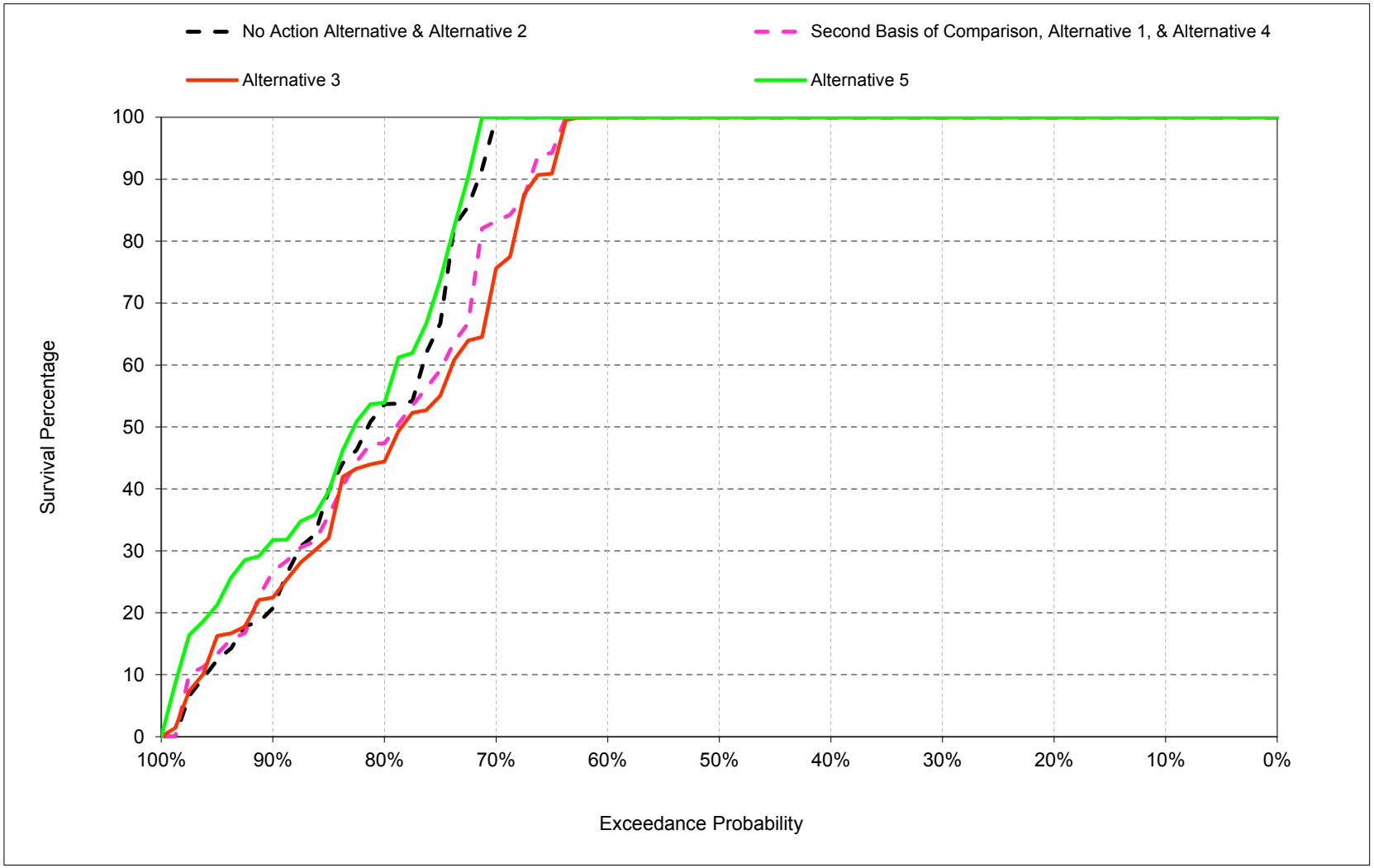
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-4-2. Shasta Large Mouth Bass Nest Survival Percentage, April



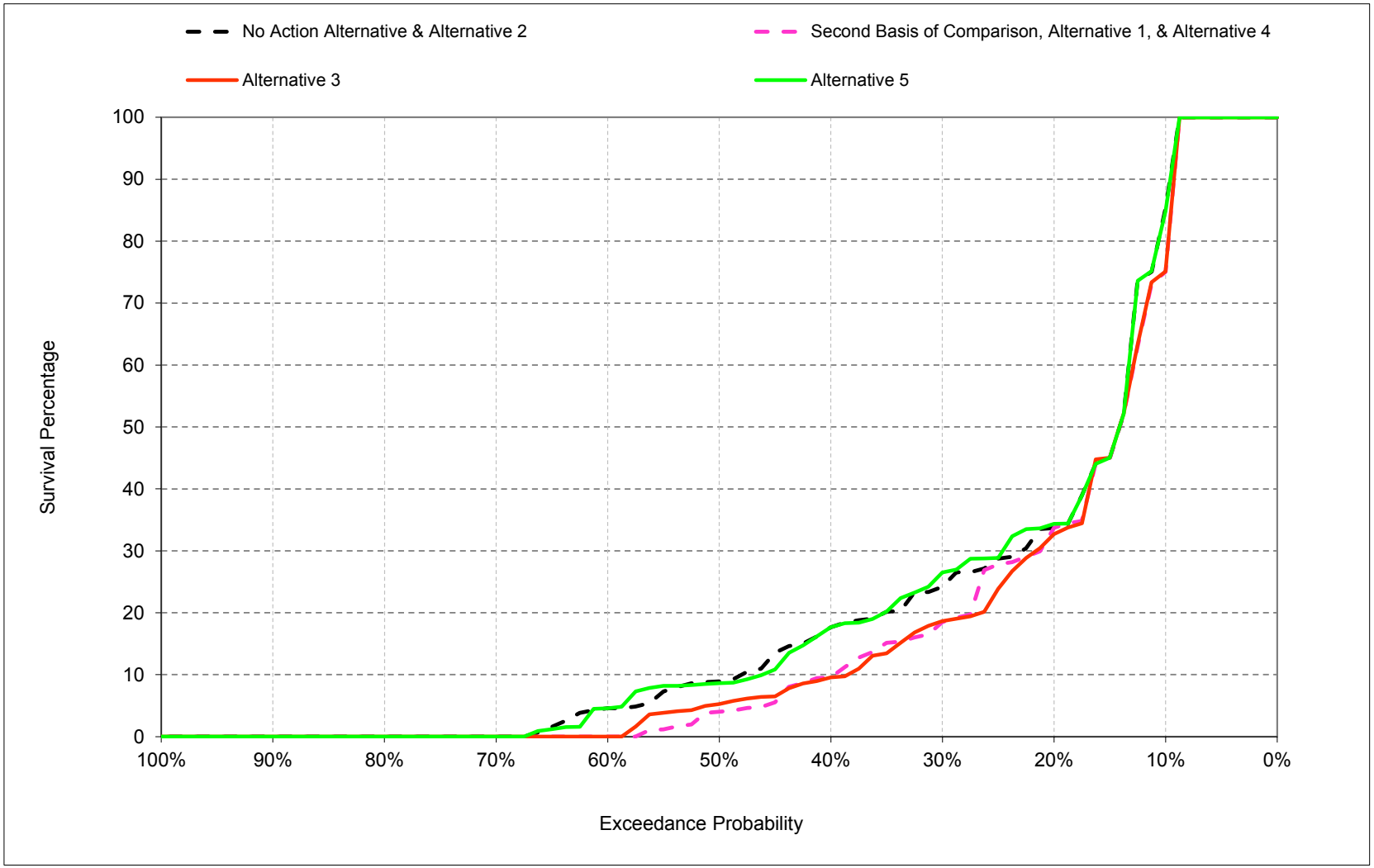
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-4-3. Shasta Large Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-4-4. Shasta Large Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-4-1. Shasta Large Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	84
20%	100	100	100	34
30%	100	100	100	24
40%	100	100	100	17
50%	100	100	100	9
60%	100	100	100	4
70%	100	100	94	0
80%	100	100	51	0
90%	100	98	19	0
Long Term				
Full Simulation Period[b]	97	94	81	22
Water Year Types[c]				
Wet (32%)	91	100	98	48
Above Normal (16%)	100	100	99	14
Below Normal (13%)	100	95	71	17
Dry (24%)	100	98	68	9
Critical (15%)	100	65	55	3

Alternative 1

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	75
20%	100	100	100	33
30%	100	100	100	18
40%	100	100	100	10
50%	100	100	100	4
60%	100	100	100	0
70%	100	100	82	0
80%	100	100	47	0
90%	100	100	23	0
Long Term				
Full Simulation Period[b]	97	94	79	20
Water Year Types[c]				
Wet (32%)	90	100	97	46
Above Normal (16%)	100	100	97	11
Below Normal (13%)	100	94	64	13
Dry (24%)	100	97	68	5
Critical (15%)	100	66	54	3

Alternative 1 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	-9
20%	0	0	0	-1
30%	0	0	0	-6
40%	0	0	0	-8
50%	0	0	0	-5
60%	0	0	0	-4
70%	0	0	-12	0
80%	0	0	-4	0
90%	0	2	4	0
Long Term				
Full Simulation Period[b]	0	0	-2	-3
Water Year Types[c]				
Wet (32%)	-1	0	-1	-2
Above Normal (16%)	0	0	-2	-3
Below Normal (13%)	0	-1	-7	-3
Dry (24%)	0	0	1	-4
Critical (15%)	0	1	-1	-1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-4-2. Shasta Large Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	84
20%	100	100	100	34
30%	100	100	100	24
40%	100	100	100	17
50%	100	100	100	9
60%	100	100	100	4
70%	100	100	94	0
80%	100	100	51	0
90%	100	98	19	0
Long Term				
Full Simulation Period[b]	97	94	81	22
Water Year Types[c]				
Wet (32%)	91	100	98	48
Above Normal (16%)	100	100	99	14
Below Normal (13%)	100	95	71	17
Dry (24%)	100	98	68	9
Critical (15%)	100	65	55	3

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	75
20%	100	100	100	32
30%	100	100	100	18
40%	100	100	100	9
50%	100	100	100	5
60%	100	100	100	0
70%	100	100	68	0
80%	100	100	44	0
90%	100	95	22	0
Long Term				
Full Simulation Period[b]	97	94	78	20
Water Year Types[c]				
Wet (32%)	90	100	96	45
Above Normal (16%)	100	100	94	12
Below Normal (13%)	100	97	64	14
Dry (24%)	100	97	68	5
Critical (15%)	100	66	54	3

Alternative 3 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	-9
20%	0	0	0	-1
30%	0	0	0	-5
40%	0	0	0	-8
50%	0	0	0	-4
60%	0	0	0	-4
70%	0	0	-26	0
80%	0	0	-7	0
90%	0	-3	3	0
Long Term				
Full Simulation Period[b]	0	0	-2	-3
Water Year Types[c]				
Wet (32%)	-1	0	-1	-3
Above Normal (16%)	0	0	-5	-3
Below Normal (13%)	0	2	-8	-3
Dry (24%)	0	0	0	-3
Critical (15%)	0	1	-1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-4-3. Shasta Large Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	84
20%	100	100	100	34
30%	100	100	100	24
40%	100	100	100	17
50%	100	100	100	9
60%	100	100	100	4
70%	100	100	94	0
80%	100	100	51	0
90%	100	98	19	0
Long Term				
Full Simulation Period[b]	97	94	81	22
Water Year Types[c]				
Wet (32%)	91	100	98	48
Above Normal (16%)	100	100	99	14
Below Normal (13%)	100	95	71	17
Dry (24%)	100	98	68	9
Critical (15%)	100	65	55	3

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	84
20%	100	100	100	34
30%	100	100	100	26
40%	100	100	100	17
50%	100	100	100	9
60%	100	100	100	4
70%	100	100	100	0
80%	100	100	54	0
90%	100	100	29	0
Long Term				
Full Simulation Period[b]	97	94	82	22
Water Year Types[c]				
Wet (32%)	90	100	98	48
Above Normal (16%)	100	100	100	14
Below Normal (13%)	100	97	71	16
Dry (24%)	100	98	72	10
Critical (15%)	100	65	58	3

Alternative 5 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	1
30%	0	0	0	2
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	6	0
80%	0	0	2	0
90%	0	2	11	0
Long Term				
Full Simulation Period[b]	0	0	2	0
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	1	0
Below Normal (13%)	0	2	0	-1
Dry (24%)	0	0	4	1
Critical (15%)	0	0	4	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-4-4. Shasta Large Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	75
20%	100	100	100	33
30%	100	100	100	18
40%	100	100	100	10
50%	100	100	100	4
60%	100	100	100	0
70%	100	100	82	0
80%	100	100	47	0
90%	100	100	23	0
Long Term				
Full Simulation Period[b]	97	94	79	20
Water Year Types[c]				
Wet (32%)	90	100	97	46
Above Normal (16%)	100	100	97	11
Below Normal (13%)	100	94	64	13
Dry (24%)	100	97	68	5
Critical (15%)	100	66	54	3

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	84
20%	100	100	100	34
30%	100	100	100	24
40%	100	100	100	17
50%	100	100	100	9
60%	100	100	100	4
70%	100	100	94	0
80%	100	100	51	0
90%	100	98	19	0
Long Term				
Full Simulation Period[b]	97	94	81	22
Water Year Types[c]				
Wet (32%)	91	100	98	48
Above Normal (16%)	100	100	99	14
Below Normal (13%)	100	95	71	17
Dry (24%)	100	98	68	9
Critical (15%)	100	65	55	3

No Action Alternative minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	9
20%	0	0	0	1
30%	0	0	0	6
40%	0	0	0	8
50%	0	0	0	5
60%	0	0	0	4
70%	0	0	12	0
80%	0	0	4	0
90%	0	-2	-4	0
Long Term				
Full Simulation Period[b]	0	0	2	3
Water Year Types[c]				
Wet (32%)	1	0	1	2
Above Normal (16%)	0	0	2	3
Below Normal (13%)	0	1	7	3
Dry (24%)	0	0	-1	4
Critical (15%)	0	-1	1	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-4-5. Shasta Large Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	75
20%	100	100	100	33
30%	100	100	100	18
40%	100	100	100	10
50%	100	100	100	4
60%	100	100	100	0
70%	100	100	82	0
80%	100	100	47	0
90%	100	100	23	0
Long Term				
Full Simulation Period[b]	97	94	79	20
Water Year Types[c]				
Wet (32%)	90	100	97	46
Above Normal (16%)	100	100	97	11
Below Normal (13%)	100	94	64	13
Dry (24%)	100	97	68	5
Critical (15%)	100	66	54	3

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	75
20%	100	100	100	32
30%	100	100	100	18
40%	100	100	100	9
50%	100	100	100	5
60%	100	100	100	0
70%	100	100	68	0
80%	100	100	44	0
90%	100	95	22	0
Long Term				
Full Simulation Period[b]	97	94	78	20
Water Year Types[c]				
Wet (32%)	90	100	96	45
Above Normal (16%)	100	100	94	12
Below Normal (13%)	100	97	64	14
Dry (24%)	100	97	68	5
Critical (15%)	100	66	54	3

Alternative 3 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	-1
30%	0	0	0	1
40%	0	0	0	0
50%	0	0	0	1
60%	0	0	0	0
70%	0	0	-15	0
80%	0	0	-3	0
90%	0	-5	-1	0
Long Term				
Full Simulation Period[b]	0	0	-1	0
Water Year Types[c]				
Wet (32%)	0	0	0	-1
Above Normal (16%)	0	0	-3	1
Below Normal (13%)	0	3	-1	0
Dry (24%)	0	0	-1	1
Critical (15%)	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-4-6. Shasta Large Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	75
20%	100	100	100	33
30%	100	100	100	18
40%	100	100	100	10
50%	100	100	100	4
60%	100	100	100	0
70%	100	100	82	0
80%	100	100	47	0
90%	100	100	23	0
Long Term				
Full Simulation Period[b]	97	94	79	20
Water Year Types[c]				
Wet (32%)	90	100	97	46
Above Normal (16%)	100	100	97	11
Below Normal (13%)	100	94	64	13
Dry (24%)	100	97	68	5
Critical (15%)	100	66	54	3

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	84
20%	100	100	100	34
30%	100	100	100	26
40%	100	100	100	17
50%	100	100	100	9
60%	100	100	100	4
70%	100	100	100	0
80%	100	100	54	0
90%	100	100	29	0
Long Term				
Full Simulation Period[b]	97	94	82	22
Water Year Types[c]				
Wet (32%)	90	100	98	48
Above Normal (16%)	100	100	100	14
Below Normal (13%)	100	97	71	16
Dry (24%)	100	98	72	10
Critical (15%)	100	65	58	3

Alternative 5 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	9
20%	0	0	0	1
30%	0	0	0	8
40%	0	0	0	8
50%	0	0	0	5
60%	0	0	0	4
70%	0	0	18	0
80%	0	0	6	0
90%	0	0	6	0
Long Term				
Full Simulation Period[b]	0	0	3	3
Water Year Types[c]				
Wet (32%)	1	0	1	2
Above Normal (16%)	0	0	3	3
Below Normal (13%)	0	2	7	3
Dry (24%)	0	0	4	5
Critical (15%)	0	-1	5	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

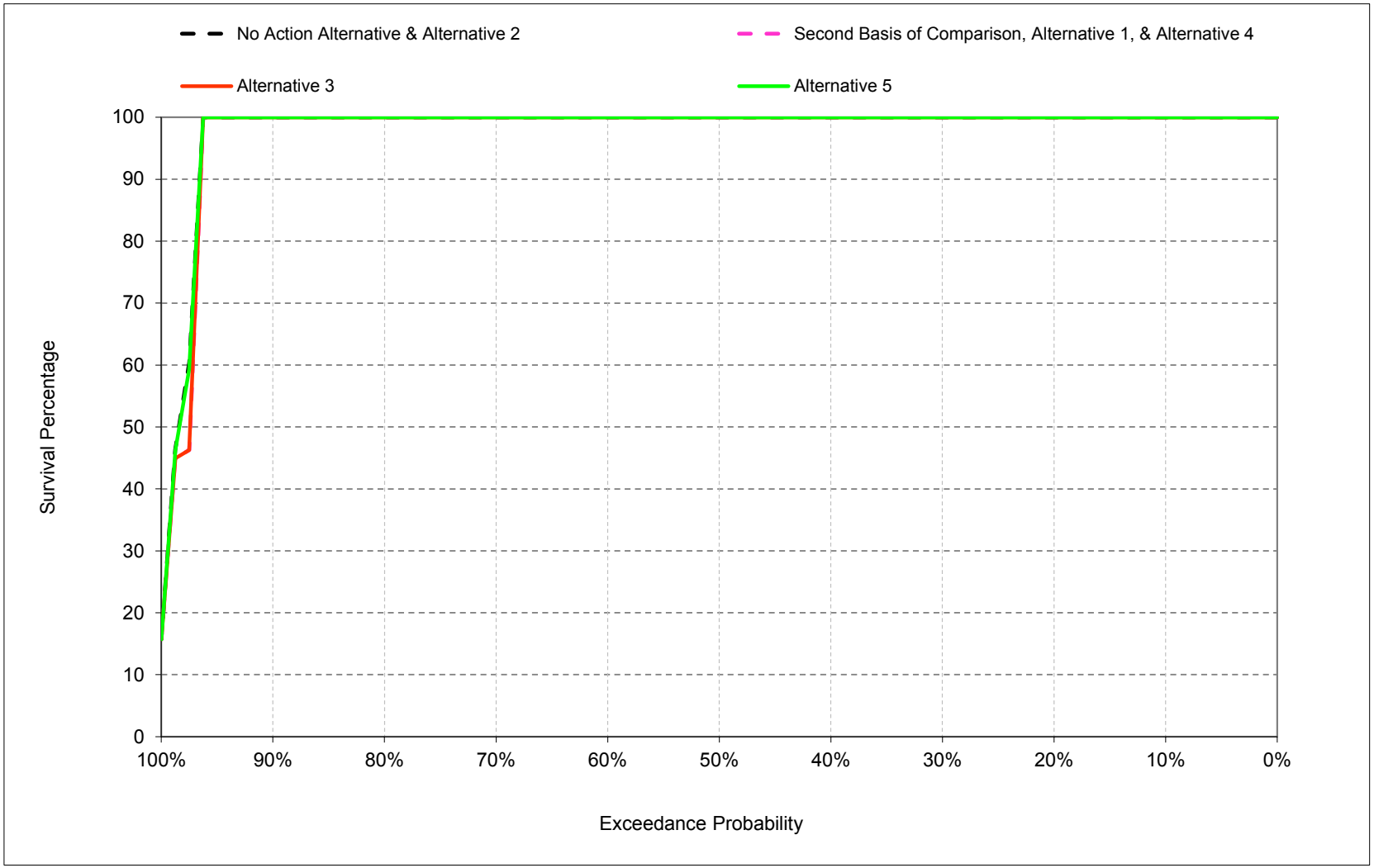
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

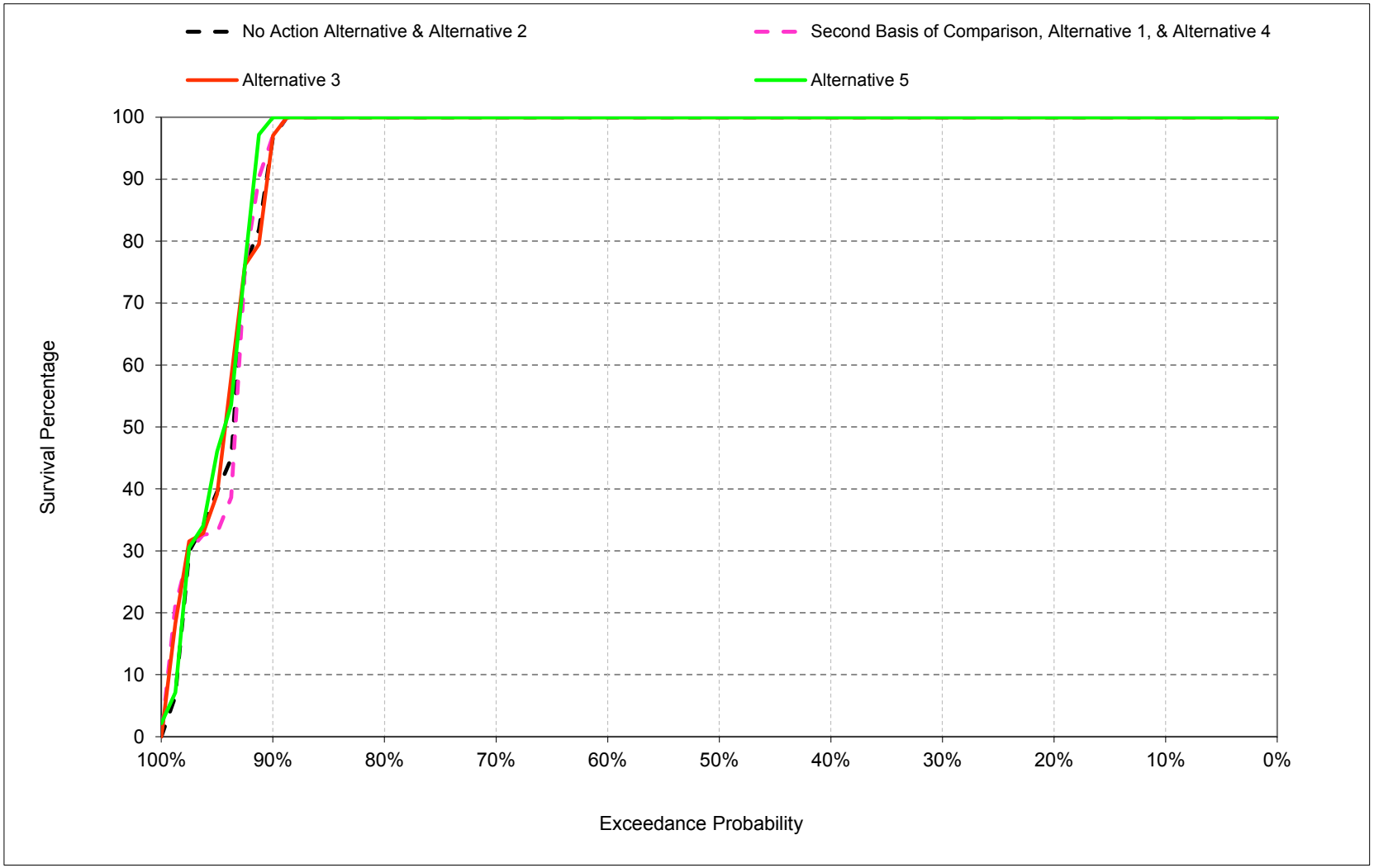
B.5. Shasta Small Mouth Bass Survival Percentage

Figure B-5-1. Shasta Small Mouth Bass Nest Survival Percentage, March



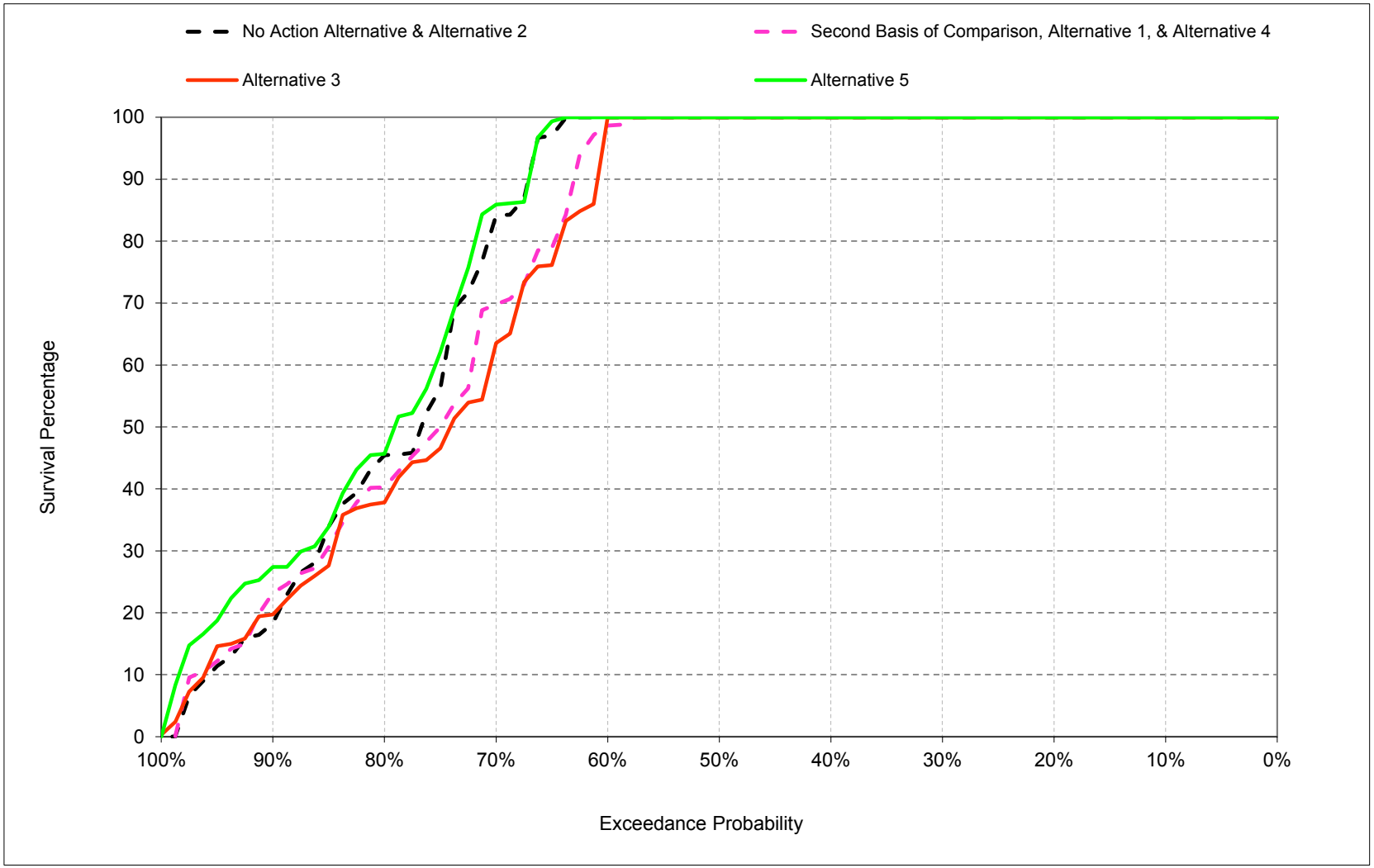
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-5-2. Shasta Small Mouth Bass Nest Survival Percentage, April



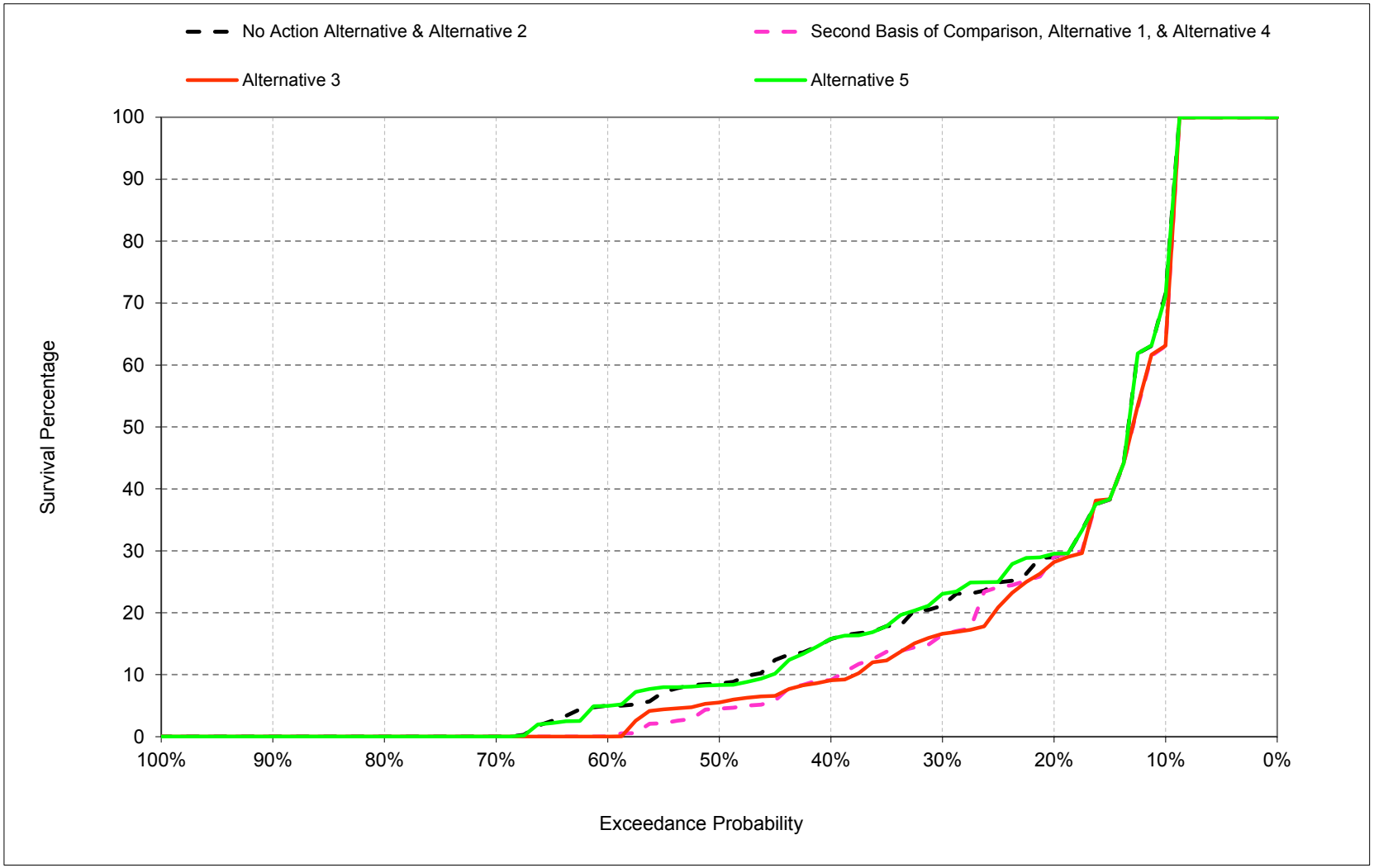
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-5-3. Shasta Small Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-5-4. Shasta Small Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-5-1. Shasta Small Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	71
20%	100	100	100	29
30%	100	100	100	21
40%	100	100	100	15
50%	100	100	100	9
60%	100	100	100	5
70%	100	100	79	0
80%	100	100	44	0
90%	100	83	17	0
Long Term				
Full Simulation Period[b]	97	93	78	21
Water Year Types[c]				
Wet (32%)	90	99	97	44
Above Normal (16%)	100	100	97	14
Below Normal (13%)	100	95	66	16
Dry (24%)	100	96	66	8
Critical (15%)	100	64	50	3

Alternative 1

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	63
20%	100	100	100	28
30%	100	100	100	16
40%	100	100	100	9
50%	100	100	100	4
60%	100	100	98	0
70%	100	100	69	0
80%	100	100	40	0
90%	100	91	20	0
Long Term				
Full Simulation Period[b]	97	93	77	19
Water Year Types[c]				
Wet (32%)	89	99	96	43
Above Normal (16%)	100	100	95	11
Below Normal (13%)	100	94	57	13
Dry (24%)	100	97	66	5
Critical (15%)	100	64	49	2

Alternative 1 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	-8
20%	0	0	0	-1
30%	0	0	0	-5
40%	0	0	0	-6
50%	0	0	0	-4
60%	0	0	-2	-5
70%	0	0	-10	0
80%	0	0	-3	0
90%	0	8	4	0
Long Term				
Full Simulation Period[b]	0	0	-2	-2
Water Year Types[c]				
Wet (32%)	-1	0	-1	-2
Above Normal (16%)	0	0	-2	-3
Below Normal (13%)	0	-1	-8	-3
Dry (24%)	0	1	0	-3
Critical (15%)	0	0	-1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-5-2. Shasta Small Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	71
20%	100	100	100	29
30%	100	100	100	21
40%	100	100	100	15
50%	100	100	100	9
60%	100	100	100	5
70%	100	100	79	0
80%	100	100	44	0
90%	100	83	17	0
Long Term				
Full Simulation Period[b]	97	93	78	21
Water Year Types[c]				
Wet (32%)	90	99	97	44
Above Normal (16%)	100	100	97	14
Below Normal (13%)	100	95	66	16
Dry (24%)	100	96	66	8
Critical (15%)	100	64	50	3

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	63
20%	100	100	100	28
30%	100	100	100	16
40%	100	100	100	9
50%	100	100	100	5
60%	100	100	92	0
70%	100	100	57	0
80%	100	100	38	0
90%	100	81	19	0
Long Term				
Full Simulation Period[b]	97	93	76	19
Water Year Types[c]				
Wet (32%)	89	99	96	42
Above Normal (16%)	100	100	91	12
Below Normal (13%)	100	96	57	13
Dry (24%)	100	96	65	5
Critical (15%)	100	65	50	3

Alternative 3 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	-8
20%	0	0	0	-1
30%	0	0	0	-5
40%	0	0	0	-6
50%	0	0	0	-3
60%	0	0	-8	-5
70%	0	0	-22	0
80%	0	0	-6	0
90%	0	-2	3	0
Long Term				
Full Simulation Period[b]	0	0	-3	-2
Water Year Types[c]				
Wet (32%)	-1	0	-2	-2
Above Normal (16%)	0	0	-6	-2
Below Normal (13%)	0	2	-9	-2
Dry (24%)	0	0	-1	-3
Critical (15%)	0	1	-1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-5-3. Shasta Small Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	71
20%	100	100	100	29
30%	100	100	100	21
40%	100	100	100	15
50%	100	100	100	9
60%	100	100	100	5
70%	100	100	79	0
80%	100	100	44	0
90%	100	83	17	0
Long Term				
Full Simulation Period[b]	97	93	78	21
Water Year Types[c]				
Wet (32%)	90	99	97	44
Above Normal (16%)	100	100	97	14
Below Normal (13%)	100	95	66	16
Dry (24%)	100	96	66	8
Critical (15%)	100	64	50	3

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	70
20%	100	100	100	29
30%	100	100	100	22
40%	100	100	100	15
50%	100	100	100	8
60%	100	100	100	5
70%	100	100	85	0
80%	100	100	45	0
90%	100	97	25	0
Long Term				
Full Simulation Period[b]	97	93	80	21
Water Year Types[c]				
Wet (32%)	90	99	97	45
Above Normal (16%)	100	100	98	14
Below Normal (13%)	100	96	65	15
Dry (24%)	100	97	70	9
Critical (15%)	100	64	55	3

Alternative 5 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	2
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	6	0
80%	0	0	2	0
90%	0	14	9	0
Long Term				
Full Simulation Period[b]	0	0	2	0
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	1	0
Below Normal (13%)	0	1	-1	0
Dry (24%)	0	1	3	1
Critical (15%)	0	0	5	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-5-4. Shasta Small Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	63
20%	100	100	100	28
30%	100	100	100	16
40%	100	100	100	9
50%	100	100	100	4
60%	100	100	98	0
70%	100	100	69	0
80%	100	100	40	0
90%	100	91	20	0
Long Term				
Full Simulation Period[b]	97	93	77	19
Water Year Types[c]				
Wet (32%)	89	99	96	43
Above Normal (16%)	100	100	95	11
Below Normal (13%)	100	94	57	13
Dry (24%)	100	97	66	5
Critical (15%)	100	64	49	2

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	71
20%	100	100	100	29
30%	100	100	100	21
40%	100	100	100	15
50%	100	100	100	9
60%	100	100	100	5
70%	100	100	79	0
80%	100	100	44	0
90%	100	83	17	0
Long Term				
Full Simulation Period[b]	97	93	78	21
Water Year Types[c]				
Wet (32%)	90	99	97	44
Above Normal (16%)	100	100	97	14
Below Normal (13%)	100	95	66	16
Dry (24%)	100	96	66	8
Critical (15%)	100	64	50	3

No Action Alternative minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	8
20%	0	0	0	1
30%	0	0	0	5
40%	0	0	0	6
50%	0	0	0	4
60%	0	0	2	5
70%	0	0	10	0
80%	0	0	3	0
90%	0	-8	-4	0
Long Term				
Full Simulation Period[b]	0	0	2	2
Water Year Types[c]				
Wet (32%)	1	0	1	2
Above Normal (16%)	0	0	2	3
Below Normal (13%)	0	1	8	3
Dry (24%)	0	-1	0	3
Critical (15%)	0	0	1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-5-5. Shasta Small Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	63
20%	100	100	100	28
30%	100	100	100	16
40%	100	100	100	9
50%	100	100	100	4
60%	100	100	98	0
70%	100	100	69	0
80%	100	100	40	0
90%	100	91	20	0
Long Term				
Full Simulation Period[b]	97	93	77	19
Water Year Types[c]				
Wet (32%)	89	99	96	43
Above Normal (16%)	100	100	95	11
Below Normal (13%)	100	94	57	13
Dry (24%)	100	97	66	5
Critical (15%)	100	64	49	2

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	63
20%	100	100	100	28
30%	100	100	100	16
40%	100	100	100	9
50%	100	100	100	5
60%	100	100	92	0
70%	100	100	57	0
80%	100	100	38	0
90%	100	81	19	0
Long Term				
Full Simulation Period[b]	97	93	76	19
Water Year Types[c]				
Wet (32%)	89	99	96	42
Above Normal (16%)	100	100	91	12
Below Normal (13%)	100	96	57	13
Dry (24%)	100	96	65	5
Critical (15%)	100	65	50	3

Alternative 3 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	-1
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	1
60%	0	0	-6	0
70%	0	0	-12	0
80%	0	0	-3	0
90%	0	-10	-1	0
Long Term				
Full Simulation Period[b]	0	0	-1	0
Water Year Types[c]				
Wet (32%)	0	0	0	-1
Above Normal (16%)	0	0	-4	1
Below Normal (13%)	0	2	0	0
Dry (24%)	0	-1	-1	0
Critical (15%)	0	1	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-5-6. Shasta Small Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	63
20%	100	100	100	28
30%	100	100	100	16
40%	100	100	100	9
50%	100	100	100	4
60%	100	100	98	0
70%	100	100	69	0
80%	100	100	40	0
90%	100	91	20	0
Long Term				
Full Simulation Period[b]	97	93	77	19
Water Year Types[c]				
Wet (32%)	89	99	96	43
Above Normal (16%)	100	100	95	11
Below Normal (13%)	100	94	57	13
Dry (24%)	100	97	66	5
Critical (15%)	100	64	49	2

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	70
20%	100	100	100	29
30%	100	100	100	22
40%	100	100	100	15
50%	100	100	100	8
60%	100	100	100	5
70%	100	100	85	0
80%	100	100	45	0
90%	100	97	25	0
Long Term				
Full Simulation Period[b]	97	93	80	21
Water Year Types[c]				
Wet (32%)	90	99	97	45
Above Normal (16%)	100	100	98	14
Below Normal (13%)	100	96	65	15
Dry (24%)	100	97	70	9
Critical (15%)	100	64	55	3

Alternative 5 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	7
20%	0	0	0	1
30%	0	0	0	7
40%	0	0	0	6
50%	0	0	0	4
60%	0	0	2	5
70%	0	0	16	0
80%	0	0	5	0
90%	0	7	5	0
Long Term				
Full Simulation Period[b]	0	0	3	2
Water Year Types[c]				
Wet (32%)	1	0	1	2
Above Normal (16%)	0	0	3	3
Below Normal (13%)	0	2	7	2
Dry (24%)	0	0	3	4
Critical (15%)	0	0	5	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

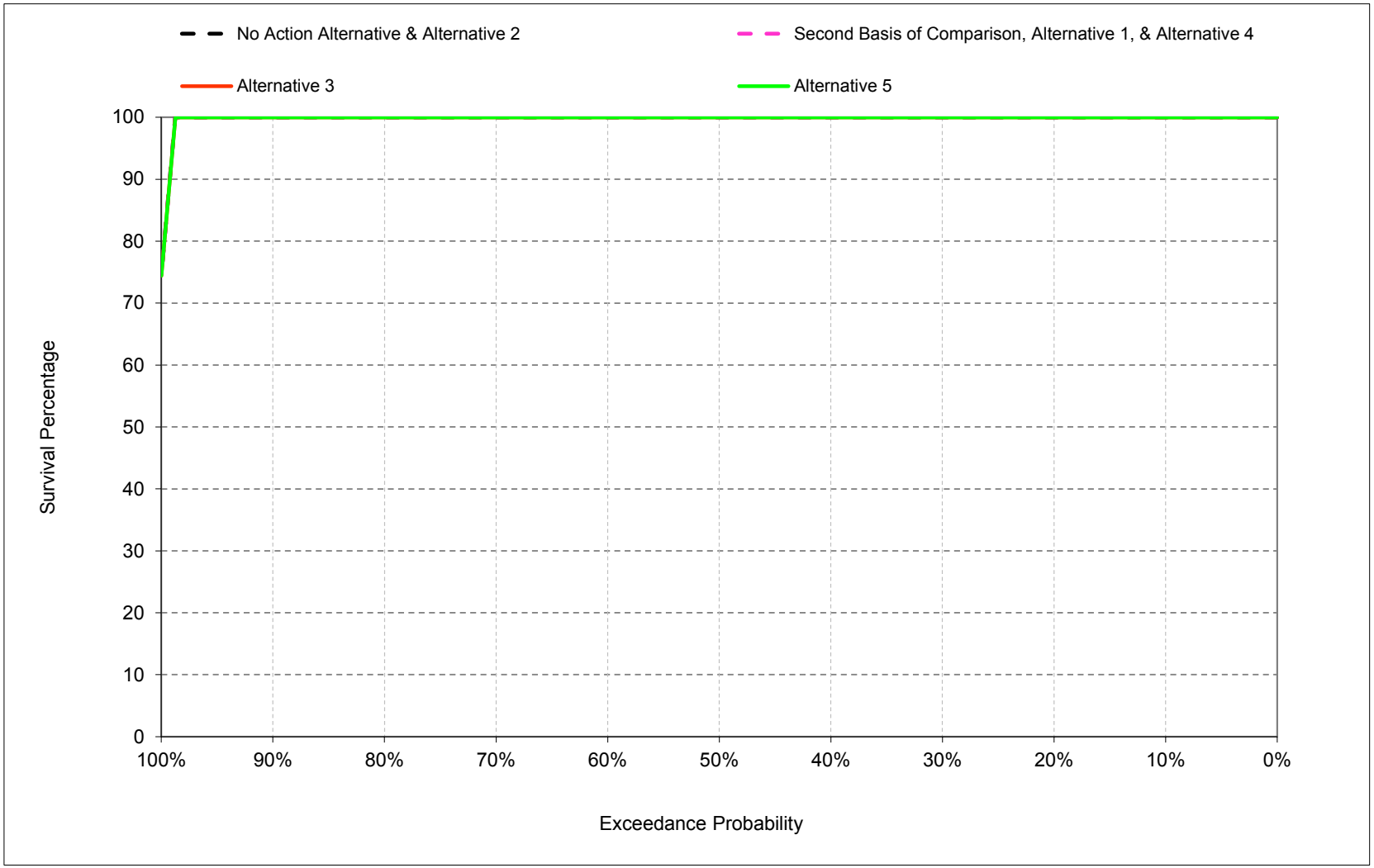
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

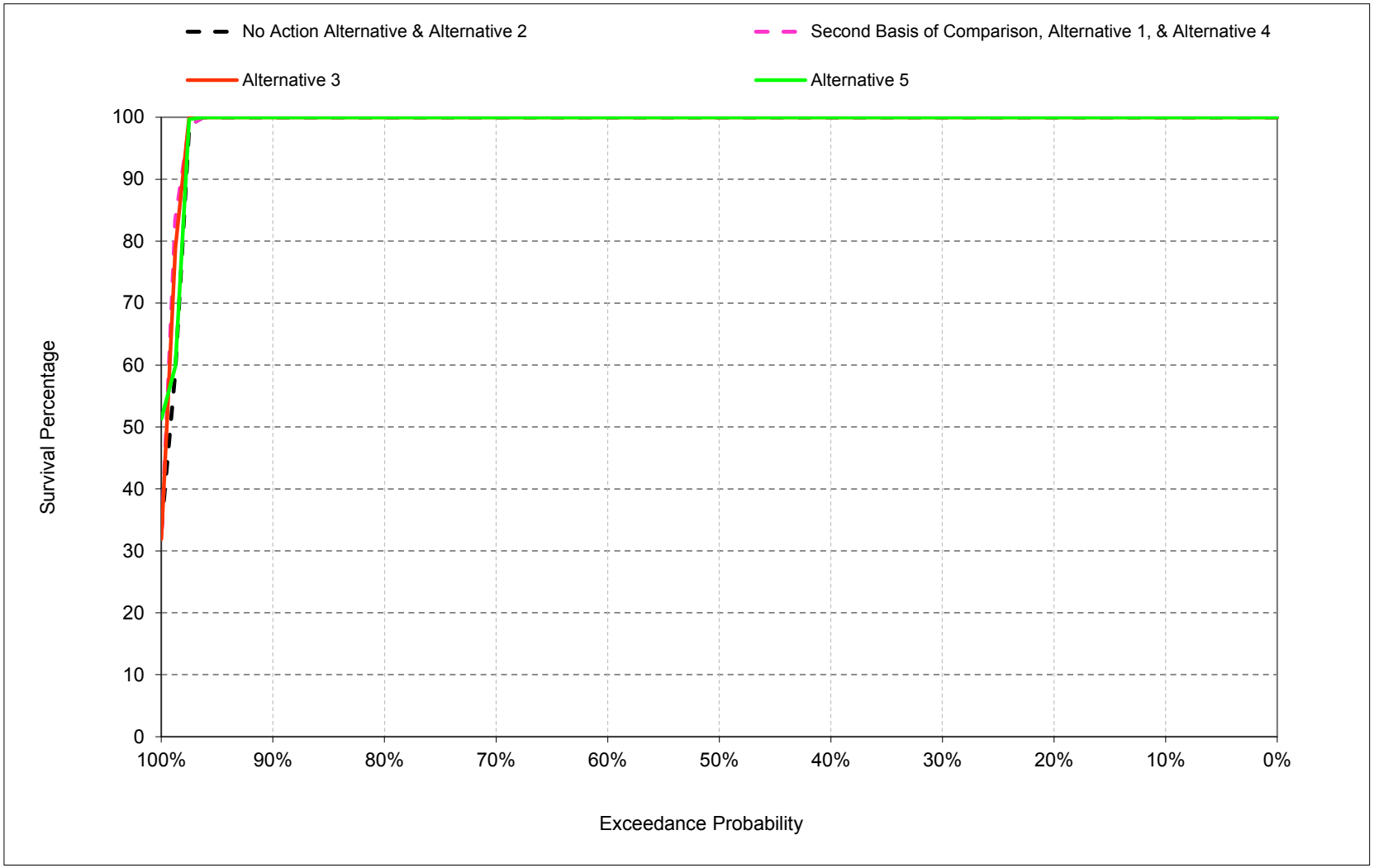
B.6. Shasta Spotted Bass Survival Percentage

Figure B-6-1. Shasta Spotted Bass Nest Survival Percentage, March



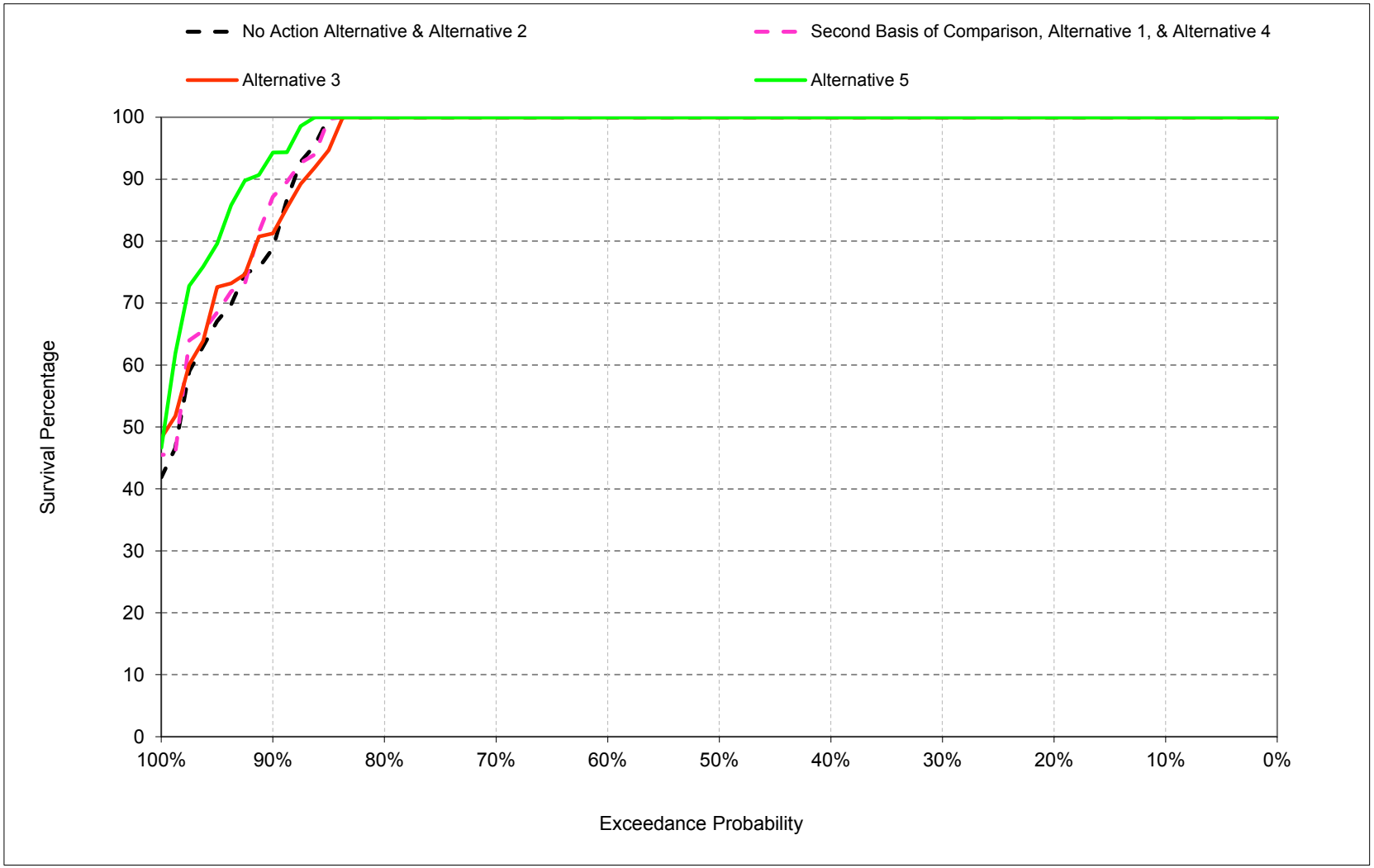
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-6-2. Shasta Spotted Bass Nest Survival Percentage, April



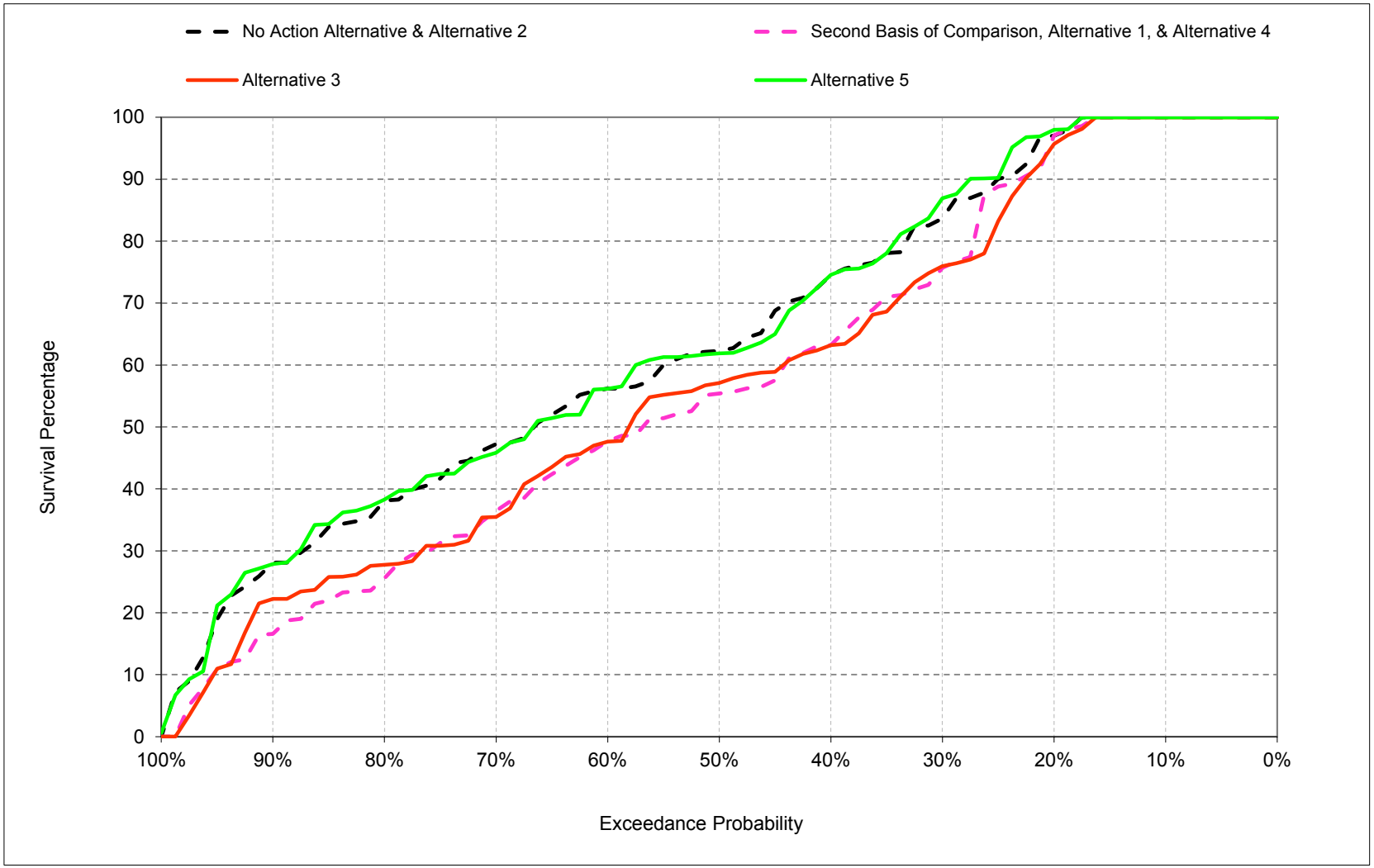
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-6-3. Shasta Spotted Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-6-4. Shasta Spotted Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-6-1. Shasta Spotted Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	97
30%	100	100	100	83
40%	100	100	100	74
50%	100	100	100	62
60%	100	100	100	56
70%	100	100	100	46
80%	100	100	100	36
90%	100	100	76	26
Long Term				
Full Simulation Period[b]	99	98	95	63
Water Year Types[c]				
Wet (32%)	98	100	100	87
Above Normal (16%)	100	100	100	60
Below Normal (13%)	100	100	96	58
Dry (24%)	100	100	91	55
Critical (15%)	100	84	84	31

Alternative 1

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	96
30%	100	100	100	75
40%	100	100	100	63
50%	100	100	100	55
60%	100	100	100	47
70%	100	100	100	35
80%	100	100	100	24
90%	100	100	82	16
Long Term				
Full Simulation Period[b]	99	98	95	56
Water Year Types[c]				
Wet (32%)	98	100	100	86
Above Normal (16%)	100	100	100	51
Below Normal (13%)	100	100	96	45
Dry (24%)	100	100	93	44
Critical (15%)	100	86	83	27

Alternative 1 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	-1
30%	0	0	0	-8
40%	0	0	0	-11
50%	0	0	0	-7
60%	0	0	0	-9
70%	0	0	0	-11
80%	0	0	0	-12
90%	0	0	6	-10
Long Term				
Full Simulation Period[b]	0	0	0	-7
Water Year Types[c]				
Wet (32%)	0	0	0	-1
Above Normal (16%)	0	0	0	-9
Below Normal (13%)	0	0	-1	-13
Dry (24%)	0	0	2	-11
Critical (15%)	0	2	0	-4

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-6-2. Shasta Spotted Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	97
30%	100	100	100	83
40%	100	100	100	74
50%	100	100	100	62
60%	100	100	100	56
70%	100	100	100	46
80%	100	100	100	36
90%	100	100	76	26
Long Term				
Full Simulation Period[b]	99	98	95	63
Water Year Types[c]				
Wet (32%)	98	100	100	87
Above Normal (16%)	100	100	100	60
Below Normal (13%)	100	100	96	58
Dry (24%)	100	100	91	55
Critical (15%)	100	84	84	31

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	95
30%	100	100	100	76
40%	100	100	100	63
50%	100	100	100	57
60%	100	100	100	47
70%	100	100	100	35
80%	100	100	100	28
90%	100	100	81	22
Long Term				
Full Simulation Period[b]	99	98	95	57
Water Year Types[c]				
Wet (32%)	98	100	100	84
Above Normal (16%)	100	100	100	53
Below Normal (13%)	100	100	96	48
Dry (24%)	100	100	92	45
Critical (15%)	100	86	84	29

Alternative 3 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	-2
30%	0	0	0	-8
40%	0	0	0	-11
50%	0	0	0	-5
60%	0	0	0	-9
70%	0	0	0	-11
80%	0	0	0	-8
90%	0	0	5	-5
Long Term				
Full Simulation Period[b]	0	0	0	-6
Water Year Types[c]				
Wet (32%)	0	0	0	-3
Above Normal (16%)	0	0	0	-7
Below Normal (13%)	0	0	-1	-11
Dry (24%)	0	0	1	-10
Critical (15%)	0	2	1	-2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-6-3. Shasta Spotted Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	97
30%	100	100	100	83
40%	100	100	100	74
50%	100	100	100	62
60%	100	100	100	56
70%	100	100	100	46
80%	100	100	100	36
90%	100	100	76	26
Long Term				
Full Simulation Period[b]	99	98	95	63
Water Year Types[c]				
Wet (32%)	98	100	100	87
Above Normal (16%)	100	100	100	60
Below Normal (13%)	100	100	96	58
Dry (24%)	100	100	91	55
Critical (15%)	100	84	84	31

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	98
30%	100	100	100	86
40%	100	100	100	74
50%	100	100	100	62
60%	100	100	100	56
70%	100	100	100	45
80%	100	100	100	37
90%	100	100	91	27
Long Term				
Full Simulation Period[b]	99	98	97	63
Water Year Types[c]				
Wet (32%)	98	100	100	87
Above Normal (16%)	100	100	100	60
Below Normal (13%)	100	100	97	58
Dry (24%)	100	100	97	56
Critical (15%)	100	87	86	32

Alternative 5 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	1
30%	0	0	0	3
40%	0	0	0	0
50%	0	0	0	**0**
60%	0	0	0	0
70%	0	0	0	**-1**
80%	0	0	0	1
90%	0	0	15	1
Long Term				
Full Simulation Period[b]	0	0	2	0
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	0	**0**
Dry (24%)	0	0	6	1
Critical (15%)	0	3	2	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-6-4. Shasta Spotted Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	96
30%	100	100	100	75
40%	100	100	100	63
50%	100	100	100	55
60%	100	100	100	47
70%	100	100	100	35
80%	100	100	100	24
90%	100	100	82	16
Long Term				
Full Simulation Period[b]	99	98	95	56
Water Year Types[c]				
Wet (32%)	98	100	100	86
Above Normal (16%)	100	100	100	51
Below Normal (13%)	100	100	96	45
Dry (24%)	100	100	93	44
Critical (15%)	100	86	83	27

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	97
30%	100	100	100	83
40%	100	100	100	74
50%	100	100	100	62
60%	100	100	100	56
70%	100	100	100	46
80%	100	100	100	36
90%	100	100	76	26
Long Term				
Full Simulation Period[b]	99	98	95	63
Water Year Types[c]				
Wet (32%)	98	100	100	87
Above Normal (16%)	100	100	100	60
Below Normal (13%)	100	100	96	58
Dry (24%)	100	100	91	55
Critical (15%)	100	84	84	31

No Action Alternative minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	1
30%	0	0	0	8
40%	0	0	0	11
50%	0	0	0	7
60%	0	0	0	9
70%	0	0	0	11
80%	0	0	0	12
90%	0	0	-6	10
Long Term				
Full Simulation Period[b]	0	0	0	7
Water Year Types[c]				
Wet (32%)	0	0	0	1
Above Normal (16%)	0	0	0	9
Below Normal (13%)	0	0	1	13
Dry (24%)	0	0	-2	11
Critical (15%)	0	-2	0	4

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-6-5. Shasta Spotted Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	96
30%	100	100	100	75
40%	100	100	100	63
50%	100	100	100	55
60%	100	100	100	47
70%	100	100	100	35
80%	100	100	100	24
90%	100	100	82	16
Long Term				
Full Simulation Period[b]	99	98	95	56
Water Year Types[c]				
Wet (32%)	98	100	100	86
Above Normal (16%)	100	100	100	51
Below Normal (13%)	100	100	96	45
Dry (24%)	100	100	93	44
Critical (15%)	100	86	83	27

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	95
30%	100	100	100	76
40%	100	100	100	63
50%	100	100	100	57
60%	100	100	100	47
70%	100	100	100	35
80%	100	100	100	28
90%	100	100	81	22
Long Term				
Full Simulation Period[b]	99	98	95	57
Water Year Types[c]				
Wet (32%)	98	100	100	84
Above Normal (16%)	100	100	100	53
Below Normal (13%)	100	100	96	48
Dry (24%)	100	100	92	45
Critical (15%)	100	86	84	29

Alternative 3 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	-1
30%	0	0	0	1
40%	0	0	0	0
50%	0	0	0	2
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	4
90%	0	0	-1	5
Long Term				
Full Simulation Period[b]	0	0	0	1
Water Year Types[c]				
Wet (32%)	0	0	0	-2
Above Normal (16%)	0	0	0	2
Below Normal (13%)	0	0	0	2
Dry (24%)	0	0	-1	1
Critical (15%)	0	0	1	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-6-6. Shasta Spotted Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	96
30%	100	100	100	75
40%	100	100	100	63
50%	100	100	100	55
60%	100	100	100	47
70%	100	100	100	35
80%	100	100	100	24
90%	100	100	82	16
Long Term				
Full Simulation Period[b]	99	98	95	56
Water Year Types[c]				
Wet (32%)	98	100	100	86
Above Normal (16%)	100	100	100	51
Below Normal (13%)	100	100	96	45
Dry (24%)	100	100	93	44
Critical (15%)	100	86	83	27

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	98
30%	100	100	100	86
40%	100	100	100	74
50%	100	100	100	62
60%	100	100	100	56
70%	100	100	100	45
80%	100	100	100	37
90%	100	100	91	27
Long Term				
Full Simulation Period[b]	99	98	97	63
Water Year Types[c]				
Wet (32%)	98	100	100	87
Above Normal (16%)	100	100	100	60
Below Normal (13%)	100	100	97	58
Dry (24%)	100	100	97	56
Critical (15%)	100	87	86	32

Alternative 5 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	2
30%	0	0	0	11
40%	0	0	0	11
50%	0	0	0	7
60%	0	0	0	9
70%	0	0	0	10
80%	0	0	0	13
90%	0	0	9	11
Long Term				
Full Simulation Period[b]	0	0	1	7
Water Year Types[c]				
Wet (32%)	0	0	0	2
Above Normal (16%)	0	0	0	9
Below Normal (13%)	0	0	1	13
Dry (24%)	0	0	4	12
Critical (15%)	0	1	2	4

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

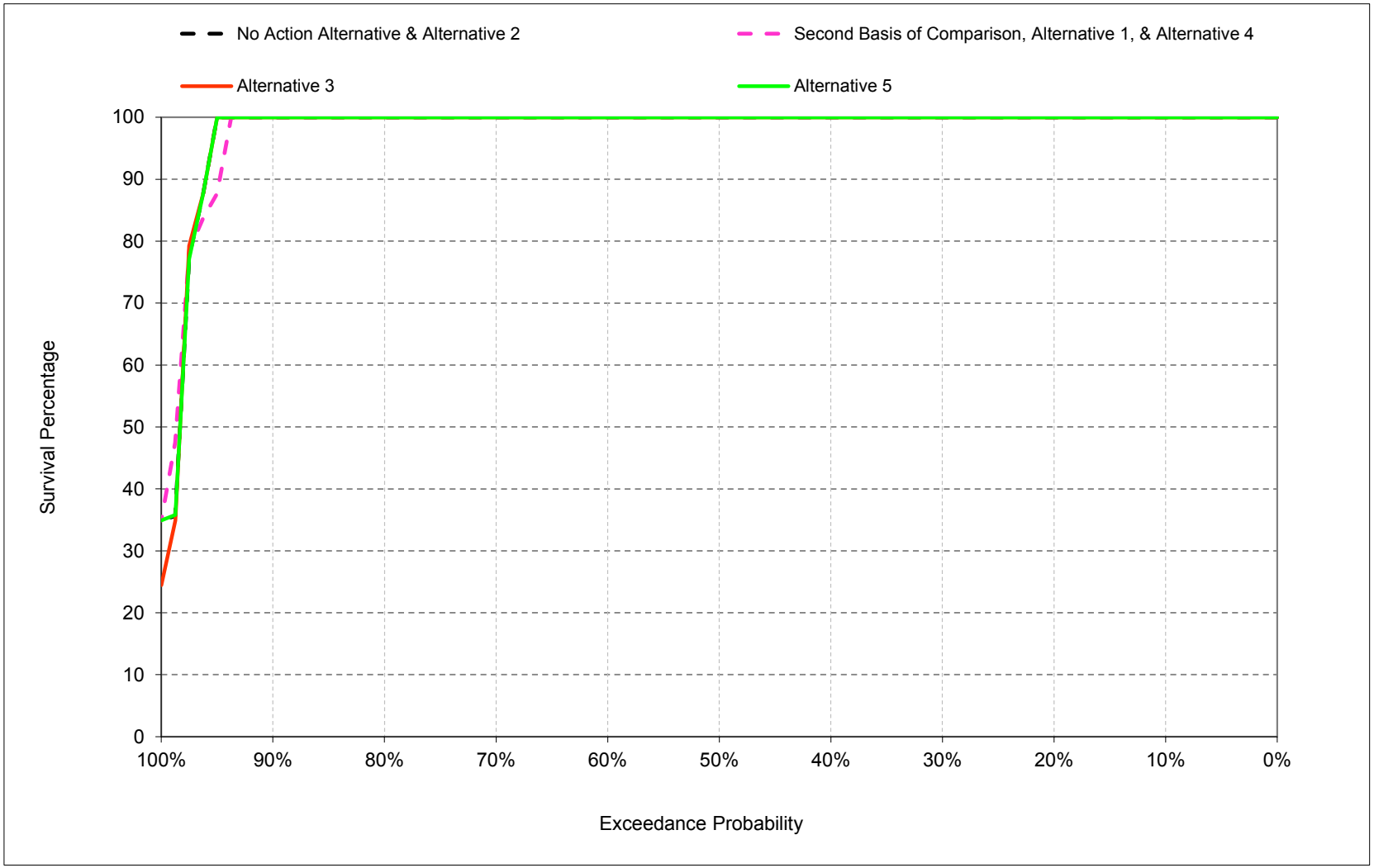
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

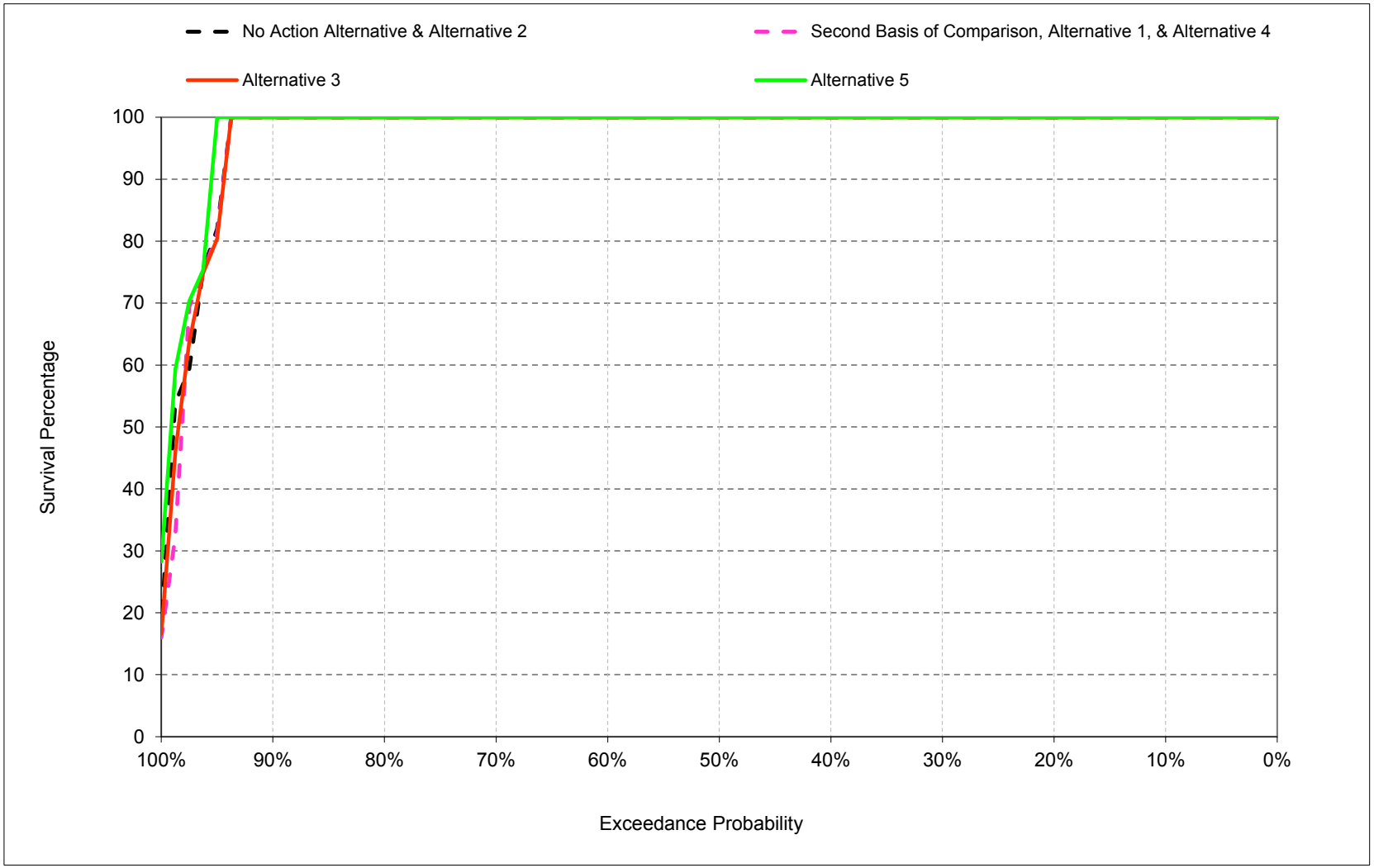
B.7. Oroville Large Mouth Bass Survival Percentage

Figure B-7-1. Oroville Large Mouth Bass Nest Survival Percentage, March



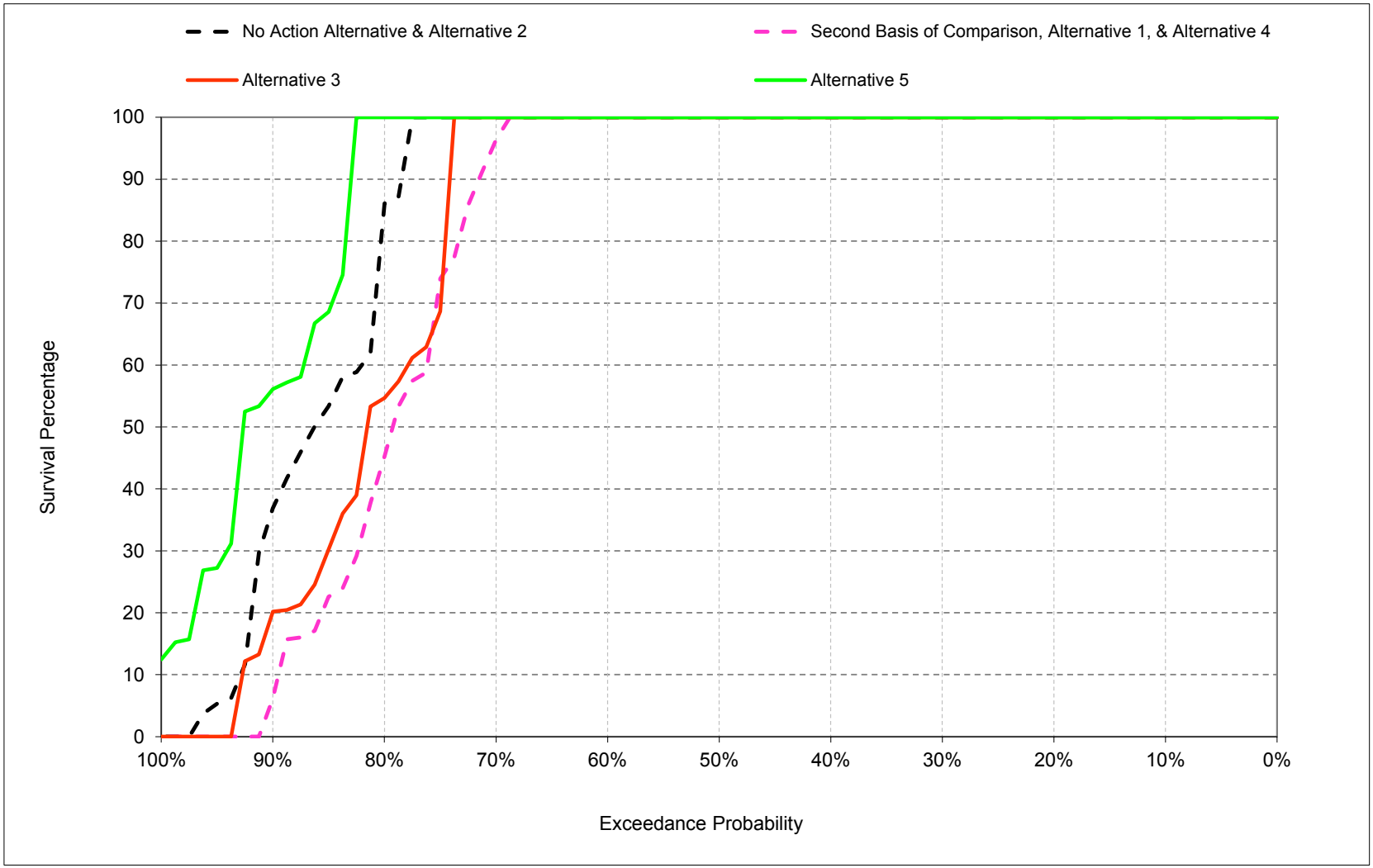
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-7-2. Oroville Large Mouth Bass Nest Survival Percentage, April



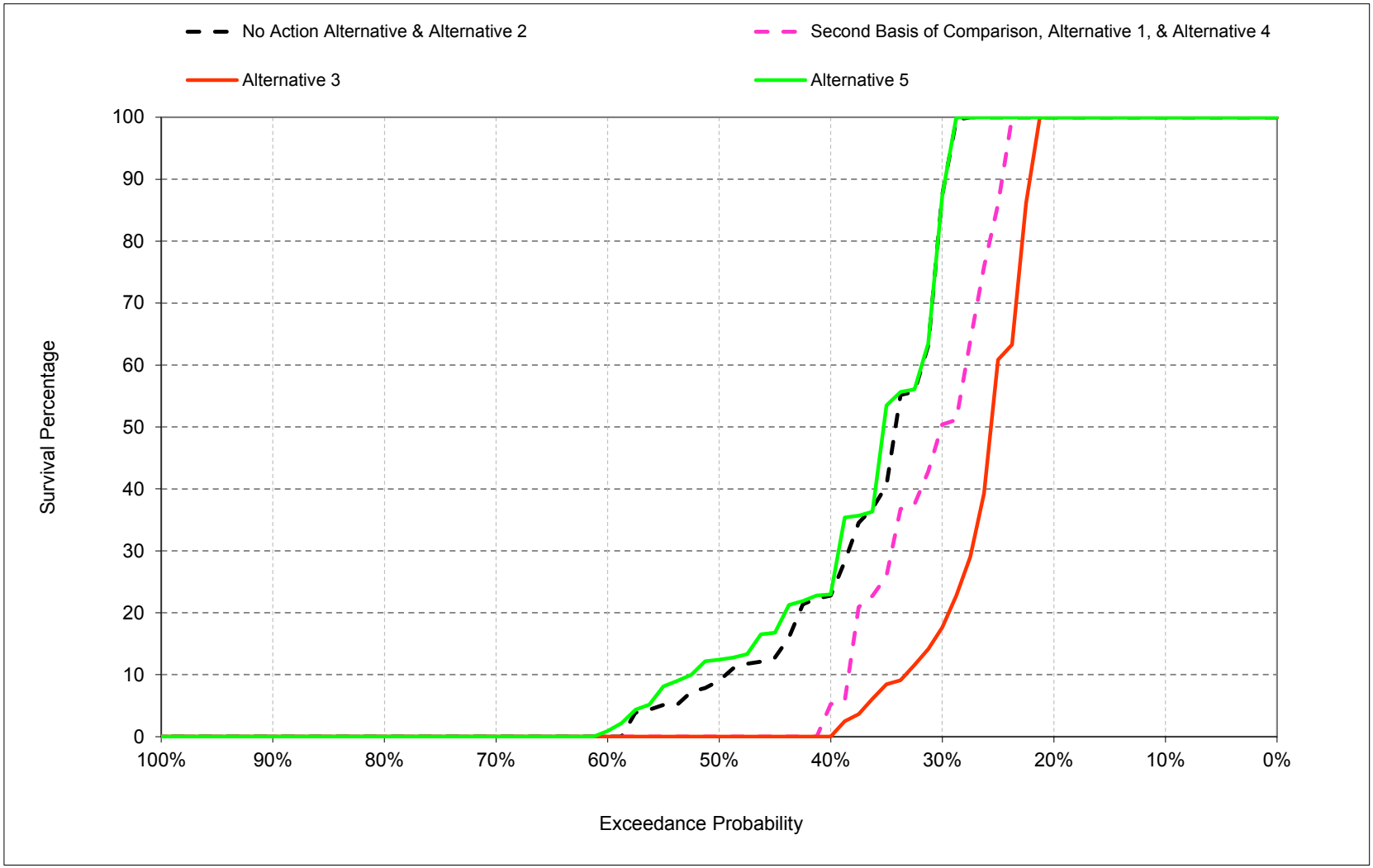
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-7-3. Oroville Large Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-7-4. Oroville Large Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-7-1. Oroville Large Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	80
40%	100	100	100	23
50%	100	100	100	8
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	67	0
90%	100	100	30	0
Long Term				
Full Simulation Period[b]	97	96	85	36
Water Year Types[c]				
Wet (32%)	91	100	100	81
Above Normal (16%)	100	100	100	37
Below Normal (13%)	100	96	82	24
Dry (24%)	100	100	69	2
Critical (15%)	98	78	62	7

Alternative 1

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	48
40%	100	100	100	3
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	93	0
80%	100	100	39	0
90%	100	100	1	0
Long Term				
Full Simulation Period[b]	97	96	78	31
Water Year Types[c]				
Wet (32%)	91	100	97	73
Above Normal (16%)	100	100	85	31
Below Normal (13%)	100	98	63	12
Dry (24%)	100	100	67	0
Critical (15%)	98	74	63	7

Alternative 1 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-32
40%	0	0	0	-19
50%	0	0	0	-8
60%	0	0	0	0
70%	0	0	-7	0
80%	0	0	-27	0
90%	0	0	-30	0
Long Term				
Full Simulation Period[b]	0	0	-6	-5
Water Year Types[c]				
Wet (32%)	0	0	-3	-8
Above Normal (16%)	0	0	-15	-6
Below Normal (13%)	0	2	-20	-12
Dry (24%)	0	0	-3	-2
Critical (15%)	0	-3	1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-7-2. Oroville Large Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	80
40%	100	100	100	23
50%	100	100	100	8
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	67	0
90%	100	100	30	0
Long Term				
Full Simulation Period[b]	97	96	85	36
Water Year Types[c]				
Wet (32%)	91	100	100	81
Above Normal (16%)	100	100	100	37
Below Normal (13%)	100	96	82	24
Dry (24%)	100	100	69	2
Critical (15%)	98	78	62	7

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	17
40%	100	100	100	0
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	54	0
90%	100	100	14	0
Long Term				
Full Simulation Period[b]	97	96	80	27
Water Year Types[c]				
Wet (32%)	90	100	97	63
Above Normal (16%)	100	100	86	26
Below Normal (13%)	100	95	73	10
Dry (24%)	100	100	67	0
Critical (15%)	98	78	65	6

Alternative 3 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-64
40%	0	0	0	-23
50%	0	0	0	-8
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	-13	0
90%	0	0	-16	0
Long Term				
Full Simulation Period[b]	0	0	-4	-10
Water Year Types[c]				
Wet (32%)	0	0	-3	-17
Above Normal (16%)	0	0	-14	-11
Below Normal (13%)	0	-1	-9	-13
Dry (24%)	0	0	-2	-2
Critical (15%)	0	0	3	-2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-7-3. Oroville Large Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	80
40%	100	100	100	23
50%	100	100	100	8
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	67	0
90%	100	100	30	0
Long Term				
Full Simulation Period[b]	97	96	85	36
Water Year Types[c]				
Wet (32%)	91	100	100	81
Above Normal (16%)	100	100	100	37
Below Normal (13%)	100	96	82	24
Dry (24%)	100	100	69	2
Critical (15%)	98	78	62	7

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	80
40%	100	100	100	23
50%	100	100	100	12
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	100	0
90%	100	100	54	0
Long Term				
Full Simulation Period[b]	97	97	89	37
Water Year Types[c]				
Wet (32%)	91	100	100	82
Above Normal (16%)	100	100	100	37
Below Normal (13%)	100	96	90	26
Dry (24%)	100	100	81	3
Critical (15%)	98	82	68	8

Alternative 5 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	4
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	33	0
90%	0	0	23	0
Long Term				
Full Simulation Period[b]	0	1	5	1
Water Year Types[c]				
Wet (32%)	0	0	0	1
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	8	2
Dry (24%)	0	0	12	1
Critical (15%)	0	4	6	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-7-4. Oroville Large Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	48
40%	100	100	100	3
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	93	0
80%	100	100	39	0
90%	100	100	1	0
Long Term				
Full Simulation Period[b]	97	96	78	31
Water Year Types[c]				
Wet (32%)	91	100	97	73
Above Normal (16%)	100	100	85	31
Below Normal (13%)	100	98	63	12
Dry (24%)	100	100	67	0
Critical (15%)	98	74	63	7

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	80
40%	100	100	100	23
50%	100	100	100	8
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	67	0
90%	100	100	30	0
Long Term				
Full Simulation Period[b]	97	96	85	36
Water Year Types[c]				
Wet (32%)	91	100	100	81
Above Normal (16%)	100	100	100	37
Below Normal (13%)	100	96	82	24
Dry (24%)	100	100	69	2
Critical (15%)	98	78	62	7

No Action Alternative minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	32
40%	0	0	0	19
50%	0	0	0	8
60%	0	0	0	0
70%	0	0	7	0
80%	0	0	27	0
90%	0	0	30	0
Long Term				
Full Simulation Period[b]	0	0	6	5
Water Year Types[c]				
Wet (32%)	0	0	3	8
Above Normal (16%)	0	0	15	6
Below Normal (13%)	0	-2	20	12
Dry (24%)	0	0	3	2
Critical (15%)	0	3	-1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-7-5. Oroville Large Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	48
40%	100	100	100	3
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	93	0
80%	100	100	39	0
90%	100	100	1	0
Long Term				
Full Simulation Period[b]	97	96	78	31
Water Year Types[c]				
Wet (32%)	91	100	97	73
Above Normal (16%)	100	100	85	31
Below Normal (13%)	100	98	63	12
Dry (24%)	100	100	67	0
Critical (15%)	98	74	63	7

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	17
40%	100	100	100	0
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	54	0
90%	100	100	14	0
Long Term				
Full Simulation Period[b]	97	96	80	27
Water Year Types[c]				
Wet (32%)	90	100	97	63
Above Normal (16%)	100	100	86	26
Below Normal (13%)	100	95	73	10
Dry (24%)	100	100	67	0
Critical (15%)	98	78	65	6

Alternative 3 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-32
40%	0	0	0	-3
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	7	0
80%	0	0	14	0
90%	0	0	13	0
Long Term				
Full Simulation Period[b]	0	0	2	-4
Water Year Types[c]				
Wet (32%)	0	0	0	-10
Above Normal (16%)	0	0	0	-5
Below Normal (13%)	0	-3	10	-1
Dry (24%)	0	0	1	0
Critical (15%)	0	4	2	-1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-7-6. Oroville Large Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	48
40%	100	100	100	3
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	93	0
80%	100	100	39	0
90%	100	100	1	0
Long Term				
Full Simulation Period[b]	97	96	78	31
Water Year Types[c]				
Wet (32%)	91	100	97	73
Above Normal (16%)	100	100	85	31
Below Normal (13%)	100	98	63	12
Dry (24%)	100	100	67	0
Critical (15%)	98	74	63	7

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	80
40%	100	100	100	23
50%	100	100	100	12
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	100	0
90%	100	100	54	0
Long Term				
Full Simulation Period[b]	97	97	89	37
Water Year Types[c]				
Wet (32%)	91	100	100	82
Above Normal (16%)	100	100	100	37
Below Normal (13%)	100	96	90	26
Dry (24%)	100	100	81	3
Critical (15%)	98	82	68	8

Alternative 5 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	32
40%	0	0	0	20
50%	0	0	0	12
60%	0	0	0	0
70%	0	0	7	0
80%	0	0	61	0
90%	0	0	53	0
Long Term				
Full Simulation Period[b]	0	1	11	6
Water Year Types[c]				
Wet (32%)	0	0	3	8
Above Normal (16%)	0	0	15	6
Below Normal (13%)	0	-2	28	14
Dry (24%)	0	0	14	2
Critical (15%)	0	7	5	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

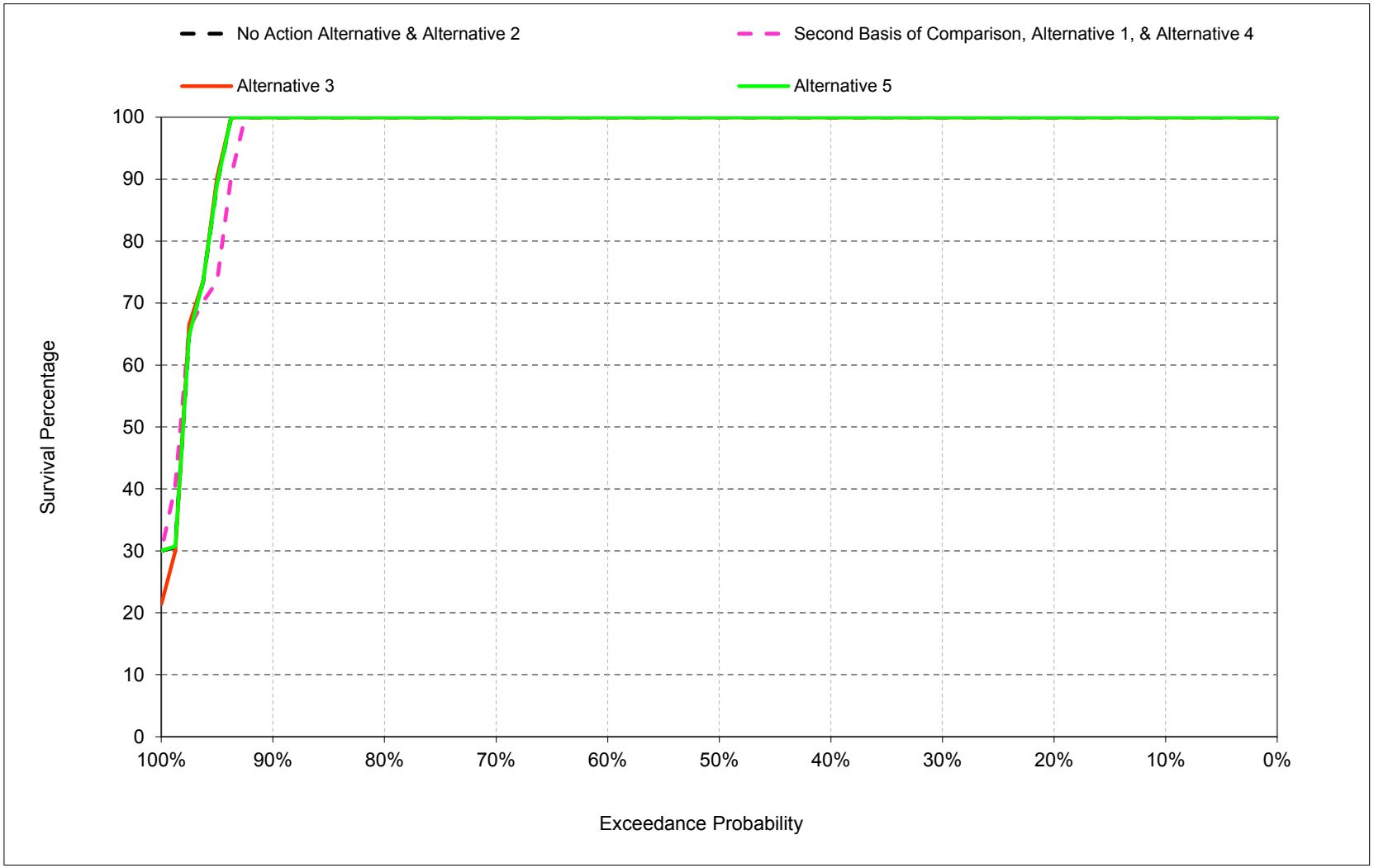
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

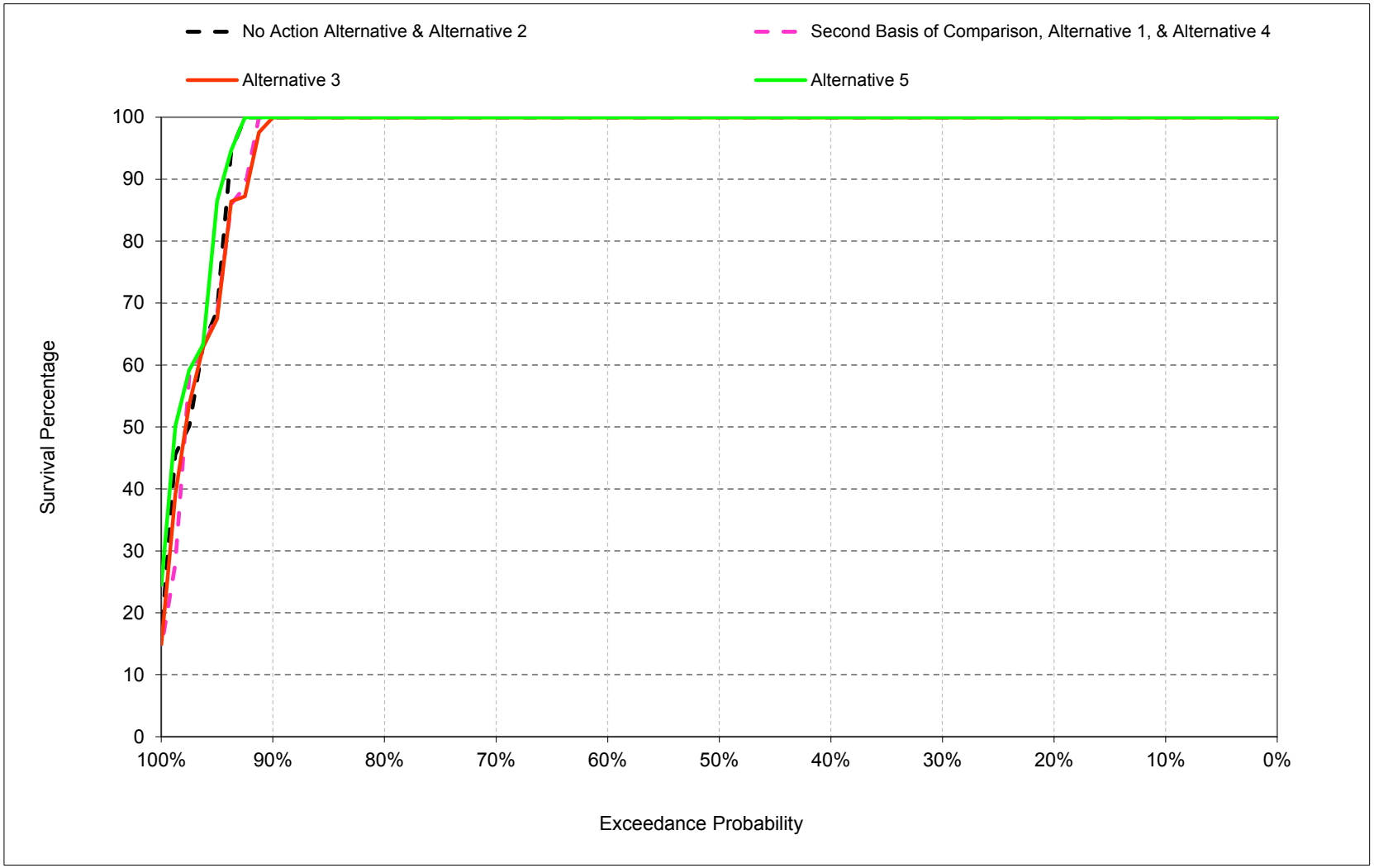
B.8. Oroville Small Mouth Bass Survival Percentage

Figure B-8-1. Oroville Small Mouth Bass Nest Survival Percentage, March



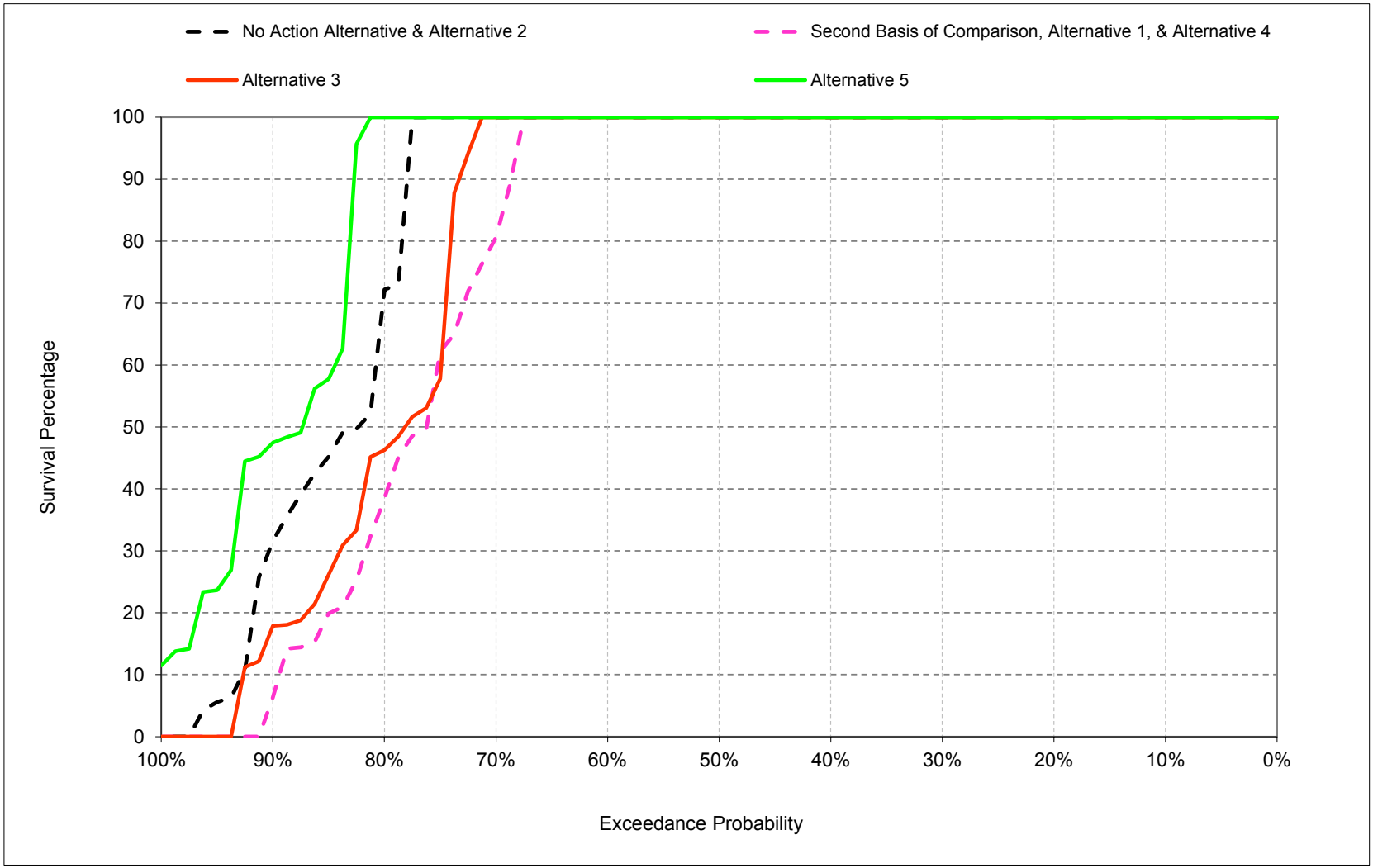
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-8-2. Oroville Small Mouth Bass Nest Survival Percentage, April



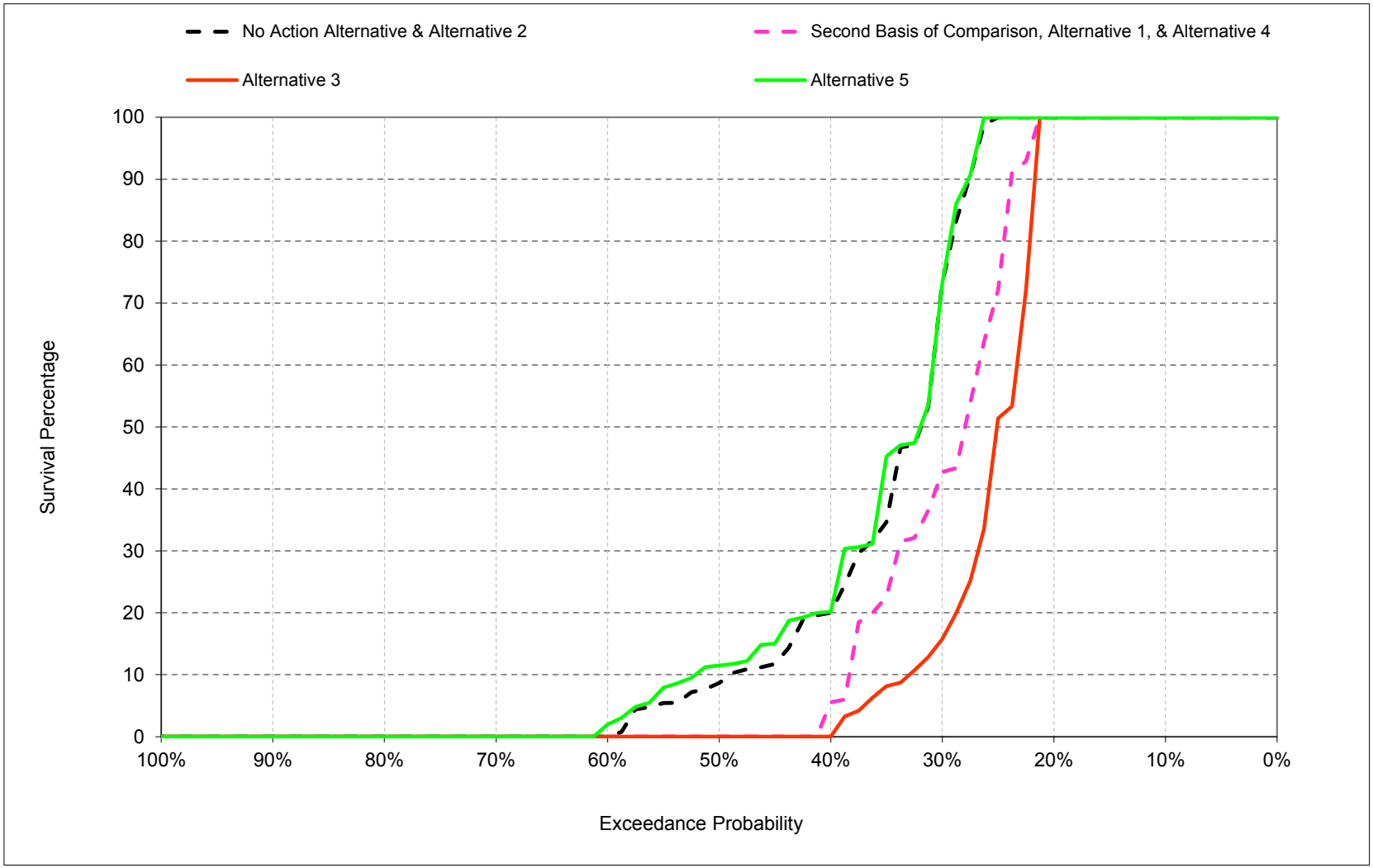
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-8-3. Oroville Small Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-8-4. Oroville Small Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-8-1. Oroville Small Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	67
40%	100	100	100	20
50%	100	100	100	8
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	56	0
90%	100	100	26	0
Long Term				
Full Simulation Period[b]	96	96	83	35
Water Year Types[c]				
Wet (32%)	90	100	100	79
Above Normal (16%)	100	100	100	35
Below Normal (13%)	100	95	81	22
Dry (24%)	100	100	68	2
Critical (15%)	97	75	58	7

Alternative 1

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	41
40%	100	100	100	3
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	78	0
80%	100	100	34	0
90%	100	100	1	0
Long Term				
Full Simulation Period[b]	96	95	77	30
Water Year Types[c]				
Wet (32%)	89	100	97	72
Above Normal (16%)	100	100	85	28
Below Normal (13%)	100	97	59	11
Dry (24%)	100	100	65	0
Critical (15%)	97	70	58	6

Alternative 1 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-26
40%	0	0	0	-17
50%	0	0	0	-8
60%	0	0	0	0
70%	0	0	-22	0
80%	0	0	-23	0
90%	0	0	-26	0
Long Term				
Full Simulation Period[b]	0	0	-7	-5
Water Year Types[c]				
Wet (32%)	-1	0	-3	-8
Above Normal (16%)	0	0	-15	-7
Below Normal (13%)	0	2	-22	-10
Dry (24%)	0	0	-3	-1
Critical (15%)	0	-5	1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-8-2. Oroville Small Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	67
40%	100	100	100	20
50%	100	100	100	8
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	56	0
90%	100	100	26	0
Long Term				
Full Simulation Period[b]	96	96	83	35
Water Year Types[c]				
Wet (32%)	90	100	100	79
Above Normal (16%)	100	100	100	35
Below Normal (13%)	100	95	81	22
Dry (24%)	100	100	68	2
Critical (15%)	97	75	58	7

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	15
40%	100	100	100	0
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	45	0
90%	100	98	13	0
Long Term				
Full Simulation Period[b]	96	95	79	26
Water Year Types[c]				
Wet (32%)	89	100	97	63
Above Normal (16%)	100	100	85	23
Below Normal (13%)	100	93	72	10
Dry (24%)	100	100	66	0
Critical (15%)	97	74	62	5

Alternative 3 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-52
40%	0	0	0	-20
50%	0	0	0	-8
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	-11	0
90%	0	-2	-14	0
Long Term				
Full Simulation Period[b]	0	0	-4	-9
Water Year Types[c]				
Wet (32%)	0	0	-3	-16
Above Normal (16%)	0	0	-15	-12
Below Normal (13%)	0	-2	-9	-11
Dry (24%)	0	0	-2	-2
Critical (15%)	0	-1	4	-1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-8-3. Oroville Small Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	67
40%	100	100	100	20
50%	100	100	100	8
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	56	0
90%	100	100	26	0
Long Term				
Full Simulation Period[b]	96	96	83	35
Water Year Types[c]				
Wet (32%)	90	100	100	79
Above Normal (16%)	100	100	100	35
Below Normal (13%)	100	95	81	22
Dry (24%)	100	100	68	2
Critical (15%)	97	75	58	7

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	67
40%	100	100	100	20
50%	100	100	100	11
60%	100	100	100	1
70%	100	100	100	0
80%	100	100	100	0
90%	100	100	45	0
Long Term				
Full Simulation Period[b]	96	96	88	36
Water Year Types[c]				
Wet (32%)	90	100	100	80
Above Normal (16%)	100	100	100	35
Below Normal (13%)	100	95	89	23
Dry (24%)	100	100	79	2
Critical (15%)	97	78	65	7

Alternative 5 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	3
60%	0	0	0	1
70%	0	0	0	0
80%	0	0	44	0
90%	0	0	19	0
Long Term				
Full Simulation Period[b]	0	1	5	1
Water Year Types[c]				
Wet (32%)	0	0	0	1
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	8	2
Dry (24%)	0	0	11	1
Critical (15%)	0	4	7	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-8-4. Oroville Small Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	41
40%	100	100	100	3
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	78	0
80%	100	100	34	0
90%	100	100	1	0
Long Term				
Full Simulation Period[b]	96	95	77	30
Water Year Types[c]				
Wet (32%)	89	100	97	72
Above Normal (16%)	100	100	85	28
Below Normal (13%)	100	97	59	11
Dry (24%)	100	100	65	0
Critical (15%)	97	70	58	6

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	67
40%	100	100	100	20
50%	100	100	100	8
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	56	0
90%	100	100	26	0
Long Term				
Full Simulation Period[b]	96	96	83	35
Water Year Types[c]				
Wet (32%)	90	100	100	79
Above Normal (16%)	100	100	100	35
Below Normal (13%)	100	95	81	22
Dry (24%)	100	100	68	2
Critical (15%)	97	75	58	7

No Action Alternative minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	26
40%	0	0	0	17
50%	0	0	0	8
60%	0	0	0	0
70%	0	0	22	0
80%	0	0	23	0
90%	0	0	26	0
Long Term				
Full Simulation Period[b]	0	0	7	5
Water Year Types[c]				
Wet (32%)	1	0	3	8
Above Normal (16%)	0	0	15	7
Below Normal (13%)	0	-2	22	10
Dry (24%)	0	0	3	1
Critical (15%)	0	5	-1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-8-5. Oroville Small Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	41
40%	100	100	100	3
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	78	0
80%	100	100	34	0
90%	100	100	1	0
Long Term				
Full Simulation Period[b]	96	95	77	30
Water Year Types[c]				
Wet (32%)	89	100	97	72
Above Normal (16%)	100	100	85	28
Below Normal (13%)	100	97	59	11
Dry (24%)	100	100	65	0
Critical (15%)	97	70	58	6

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	15
40%	100	100	100	0
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	45	0
90%	100	98	13	0
Long Term				
Full Simulation Period[b]	96	95	79	26
Water Year Types[c]				
Wet (32%)	89	100	97	63
Above Normal (16%)	100	100	85	23
Below Normal (13%)	100	93	72	10
Dry (24%)	100	100	66	0
Critical (15%)	97	74	62	5

Alternative 3 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-26
40%	0	0	0	-3
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	22	0
80%	0	0	12	0
90%	0	-2	12	0
Long Term				
Full Simulation Period[b]	0	0	2	-4
Water Year Types[c]				
Wet (32%)	0	0	0	-9
Above Normal (16%)	0	0	0	-5
Below Normal (13%)	0	-4	13	-1
Dry (24%)	0	0	1	0
Critical (15%)	0	4	3	-1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-8-6. Oroville Small Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	41
40%	100	100	100	3
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	78	0
80%	100	100	34	0
90%	100	100	1	0
Long Term				
Full Simulation Period[b]	96	95	77	30
Water Year Types[c]				
Wet (32%)	89	100	97	72
Above Normal (16%)	100	100	85	28
Below Normal (13%)	100	97	59	11
Dry (24%)	100	100	65	0
Critical (15%)	97	70	58	6

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	67
40%	100	100	100	20
50%	100	100	100	11
60%	100	100	100	1
70%	100	100	100	0
80%	100	100	100	0
90%	100	100	45	0
Long Term				
Full Simulation Period[b]	96	96	88	36
Water Year Types[c]				
Wet (32%)	90	100	100	80
Above Normal (16%)	100	100	100	35
Below Normal (13%)	100	95	89	23
Dry (24%)	100	100	79	2
Critical (15%)	97	78	65	7

Alternative 5 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	26
40%	0	0	0	17
50%	0	0	0	11
60%	0	0	0	1
70%	0	0	22	0
80%	0	0	66	0
90%	0	0	45	0
Long Term				
Full Simulation Period[b]	0	1	12	6
Water Year Types[c]				
Wet (32%)	1	0	3	8
Above Normal (16%)	0	0	15	7
Below Normal (13%)	0	-2	30	12
Dry (24%)	0	0	14	2
Critical (15%)	0	8	7	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

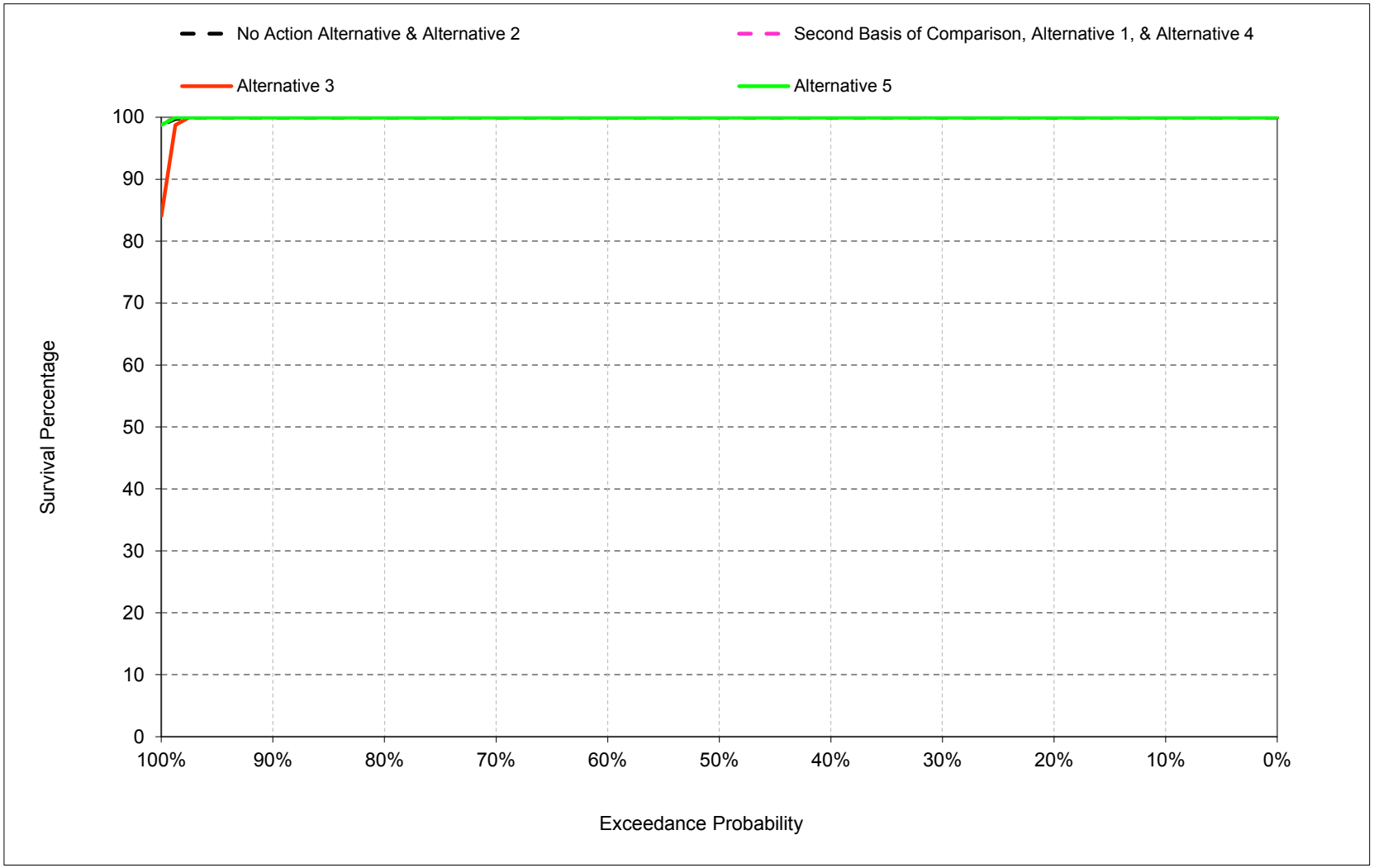
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

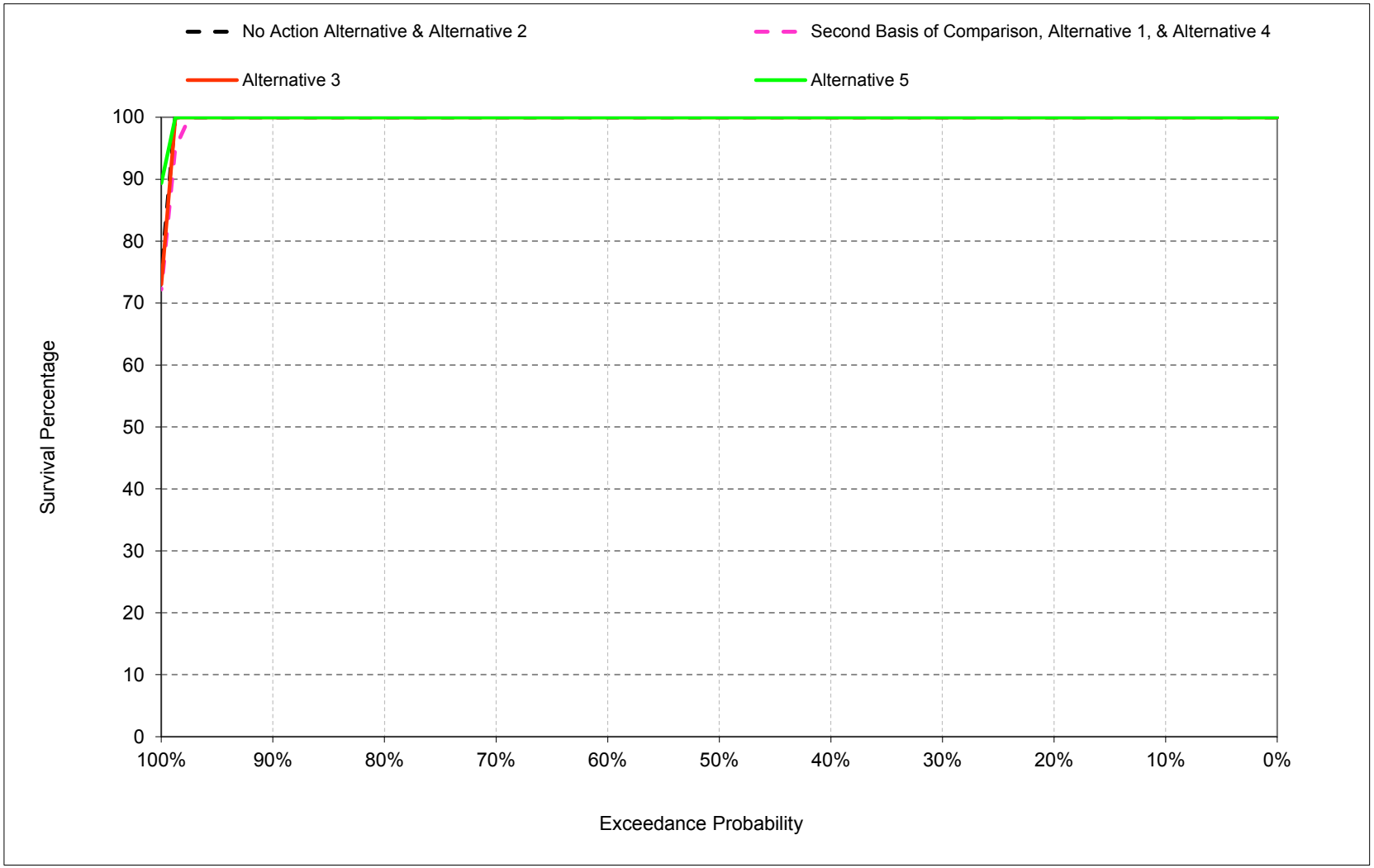
B.9. Oroville Spotted Bass Survival Percentage

Figure B-9-1. Oroville Spotted Bass Nest Survival Percentage, March



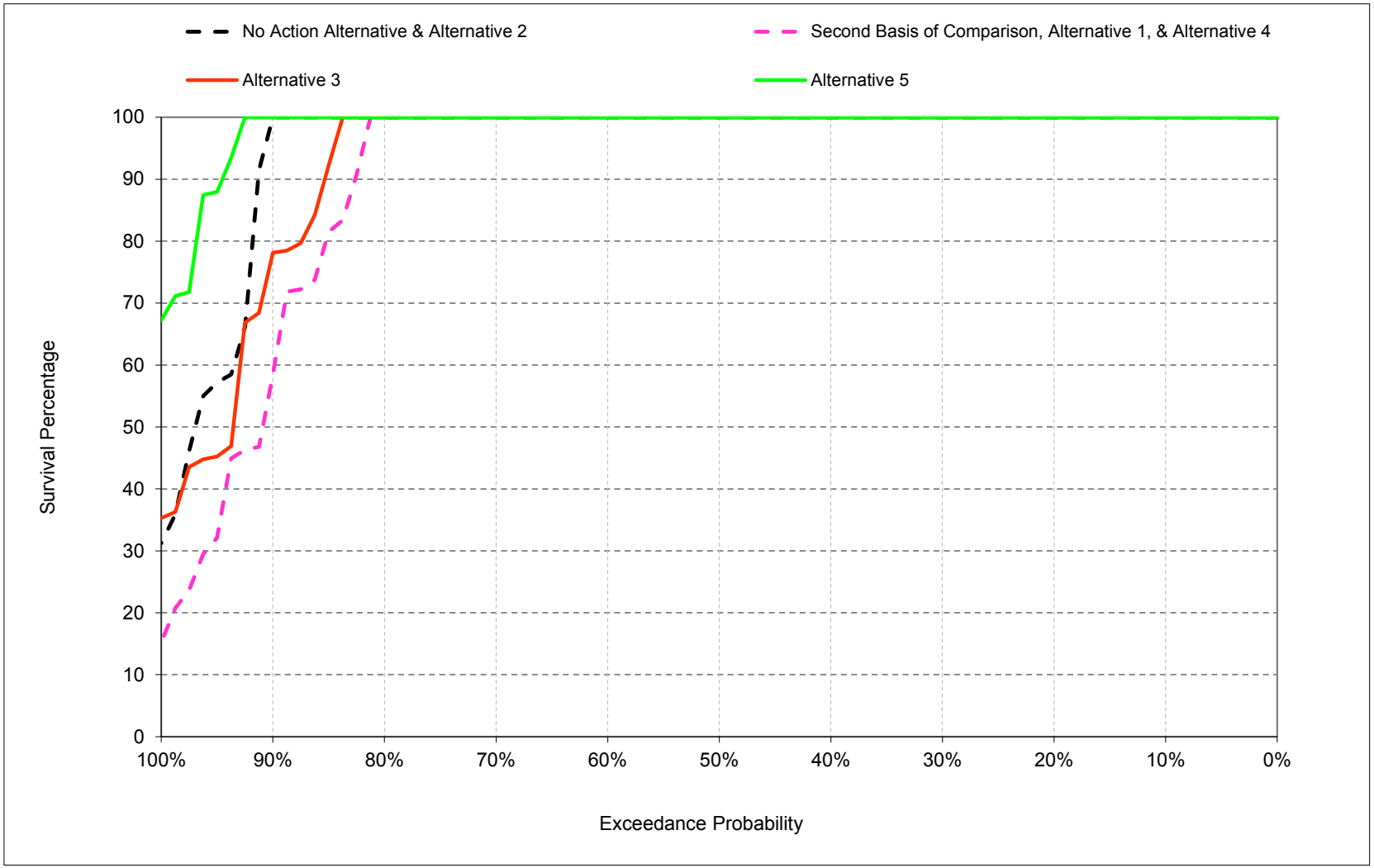
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-9-2. Oroville Spotted Bass Nest Survival Percentage, April



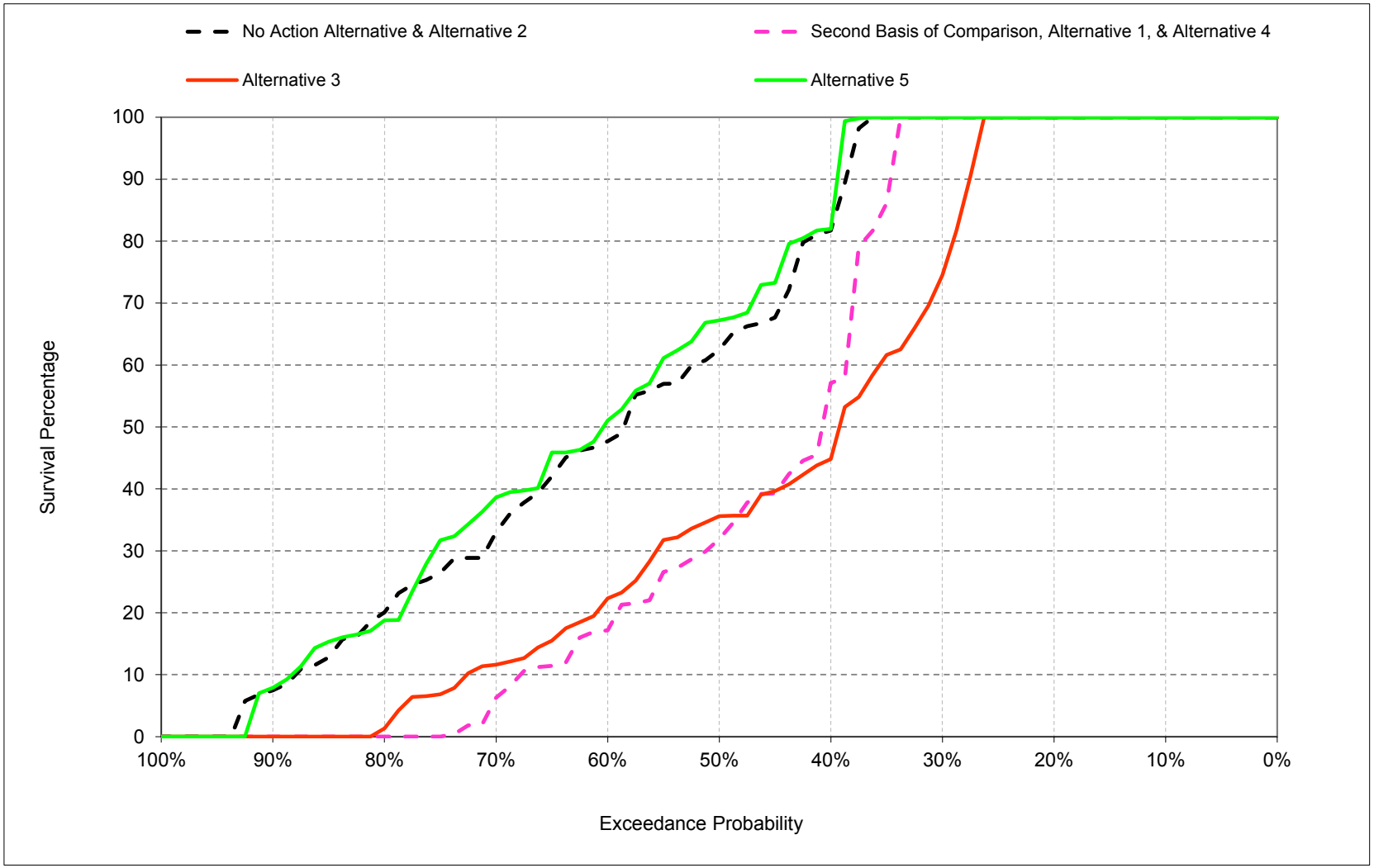
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-9-3. Oroville Spotted Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-9-4. Oroville Spotted Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-9-1. Oroville Spotted Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	81
50%	100	100	100	62
60%	100	100	100	47
70%	100	100	100	30
80%	100	100	100	19
90%	100	100	92	7
Long Term				
Full Simulation Period[b]	99	99	95	60
Water Year Types[c]				
Wet (32%)	98	100	100	95
Above Normal (16%)	100	100	100	68
Below Normal (13%)	100	100	96	55
Dry (24%)	100	100	86	22
Critical (15%)	100	94	90	43

Alternative 1

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	52
50%	100	100	100	31
60%	100	100	100	17
70%	100	100	100	3
80%	100	100	100	0
90%	100	100	48	0
Long Term				
Full Simulation Period[b]	99	99	90	46
Water Year Types[c]				
Wet (32%)	98	100	99	86
Above Normal (16%)	100	100	93	44
Below Normal (13%)	100	100	78	26
Dry (24%)	100	100	83	14
Critical (15%)	100	90	90	32

Alternative 1 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	-29
50%	0	0	0	-31
60%	0	0	0	-30
70%	0	0	0	-27
80%	0	0	0	-19
90%	0	0	-44	-7
Long Term				
Full Simulation Period[b]	0	-1	-4	-14
Water Year Types[c]				
Wet (32%)	0	0	-1	-9
Above Normal (16%)	0	0	-7	-24
Below Normal (13%)	0	0	-18	-29
Dry (24%)	0	0	-3	-8
Critical (15%)	0	-4	0	-11

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-9-2. Oroville Spotted Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	81
50%	100	100	100	62
60%	100	100	100	47
70%	100	100	100	30
80%	100	100	100	19
90%	100	100	92	7
Long Term				
Full Simulation Period[b]	99	99	95	60
Water Year Types[c]				
Wet (32%)	98	100	100	95
Above Normal (16%)	100	100	100	68
Below Normal (13%)	100	100	96	55
Dry (24%)	100	100	86	22
Critical (15%)	100	94	90	43

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	73
40%	100	100	100	44
50%	100	100	100	35
60%	100	100	100	21
70%	100	100	100	11
80%	100	100	100	0
90%	100	100	69	0
Long Term				
Full Simulation Period[b]	99	99	93	44
Water Year Types[c]				
Wet (32%)	98	100	100	79
Above Normal (16%)	100	100	93	49
Below Normal (13%)	100	100	91	34
Dry (24%)	100	100	85	9
Critical (15%)	100	90	93	32

Alternative 3 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-27
40%	0	0	0	-37
50%	0	0	0	-27
60%	0	0	0	-26
70%	0	0	0	-19
80%	0	0	0	-19
90%	0	0	-23	-7
Long Term				
Full Simulation Period[b]	0	-1	-2	-16
Water Year Types[c]				
Wet (32%)	-1	0	0	-16
Above Normal (16%)	0	0	-7	-19
Below Normal (13%)	0	0	-5	-21
Dry (24%)	0	0	-2	-13
Critical (15%)	0	-4	4	-10

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-9-3. Oroville Spotted Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	81
50%	100	100	100	62
60%	100	100	100	47
70%	100	100	100	30
80%	100	100	100	19
90%	100	100	92	7
Long Term				
Full Simulation Period[b]	99	99	95	60
Water Year Types[c]				
Wet (32%)	98	100	100	95
Above Normal (16%)	100	100	100	68
Below Normal (13%)	100	100	96	55
Dry (24%)	100	100	86	22
Critical (15%)	100	94	90	43

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	82
50%	100	100	100	67
60%	100	100	100	49
70%	100	100	100	37
80%	100	100	100	17
90%	100	100	100	7
Long Term				
Full Simulation Period[b]	99	99	98	61
Water Year Types[c]				
Wet (32%)	98	100	100	95
Above Normal (16%)	100	100	100	69
Below Normal (13%)	100	100	97	59
Dry (24%)	100	100	97	23
Critical (15%)	100	96	94	46

Alternative 5 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	5
60%	0	0	0	2
70%	0	0	0	7
80%	0	0	0	-1
90%	0	0	8	0
Long Term				
Full Simulation Period[b]	0	0	3	1
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	2	4
Dry (24%)	0	0	11	0
Critical (15%)	0	2	4	3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-9-4. Oroville Spotted Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	52
50%	100	100	100	31
60%	100	100	100	17
70%	100	100	100	3
80%	100	100	100	0
90%	100	100	48	0
Long Term				
Full Simulation Period[b]	99	99	90	46
Water Year Types[c]				
Wet (32%)	98	100	99	86
Above Normal (16%)	100	100	93	44
Below Normal (13%)	100	100	78	26
Dry (24%)	100	100	83	14
Critical (15%)	100	90	90	32

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	81
50%	100	100	100	62
60%	100	100	100	47
70%	100	100	100	30
80%	100	100	100	19
90%	100	100	92	7
Long Term				
Full Simulation Period[b]	99	99	95	60
Water Year Types[c]				
Wet (32%)	98	100	100	95
Above Normal (16%)	100	100	100	68
Below Normal (13%)	100	100	96	55
Dry (24%)	100	100	86	22
Critical (15%)	100	94	90	43

No Action Alternative minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	29
50%	0	0	0	31
60%	0	0	0	30
70%	0	0	0	27
80%	0	0	0	19
90%	0	0	44	7
Long Term				
Full Simulation Period[b]	0	1	4	14
Water Year Types[c]				
Wet (32%)	0	0	1	9
Above Normal (16%)	0	0	7	24
Below Normal (13%)	0	0	18	29
Dry (24%)	0	0	3	8
Critical (15%)	0	4	0	11

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-9-5. Oroville Spotted Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	52
50%	100	100	100	31
60%	100	100	100	17
70%	100	100	100	3
80%	100	100	100	0
90%	100	100	48	0
Long Term				
Full Simulation Period[b]	99	99	90	46
Water Year Types[c]				
Wet (32%)	98	100	99	86
Above Normal (16%)	100	100	93	44
Below Normal (13%)	100	100	78	26
Dry (24%)	100	100	83	14
Critical (15%)	100	90	90	32

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	73
40%	100	100	100	44
50%	100	100	100	35
60%	100	100	100	21
70%	100	100	100	11
80%	100	100	100	0
90%	100	100	69	0
Long Term				
Full Simulation Period[b]	99	99	93	44
Water Year Types[c]				
Wet (32%)	98	100	100	79
Above Normal (16%)	100	100	93	49
Below Normal (13%)	100	100	91	34
Dry (24%)	100	100	85	9
Critical (15%)	100	90	93	32

Alternative 3 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-27
40%	0	0	0	-8
50%	0	0	0	4
60%	0	0	0	4
70%	0	0	0	8
80%	0	0	0	0
90%	0	0	21	0
Long Term				
Full Simulation Period[b]	0	0	3	-2
Water Year Types[c]				
Wet (32%)	-1	0	0	-7
Above Normal (16%)	0	0	1	5
Below Normal (13%)	0	0	13	8
Dry (24%)	0	0	1	-5
Critical (15%)	0	1	3	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-9-6. Oroville Spotted Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	52
50%	100	100	100	31
60%	100	100	100	17
70%	100	100	100	3
80%	100	100	100	0
90%	100	100	48	0
Long Term				
Full Simulation Period[b]	99	99	90	46
Water Year Types[c]				
Wet (32%)	98	100	99	86
Above Normal (16%)	100	100	93	44
Below Normal (13%)	100	100	78	26
Dry (24%)	100	100	83	14
Critical (15%)	100	90	90	32

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	82
50%	100	100	100	67
60%	100	100	100	49
70%	100	100	100	37
80%	100	100	100	17
90%	100	100	100	7
Long Term				
Full Simulation Period[b]	99	99	98	61
Water Year Types[c]				
Wet (32%)	98	100	100	95
Above Normal (16%)	100	100	100	69
Below Normal (13%)	100	100	97	59
Dry (24%)	100	100	97	23
Critical (15%)	100	96	94	46

Alternative 5 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	29
50%	0	0	0	36
60%	0	0	0	32
70%	0	0	0	34
80%	0	0	0	17
90%	0	0	52	7
Long Term				
Full Simulation Period[b]	0	1	8	15
Water Year Types[c]				
Wet (32%)	0	0	1	9
Above Normal (16%)	0	0	7	24
Below Normal (13%)	0	0	19	34
Dry (24%)	0	0	14	8
Critical (15%)	0	6	3	14

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

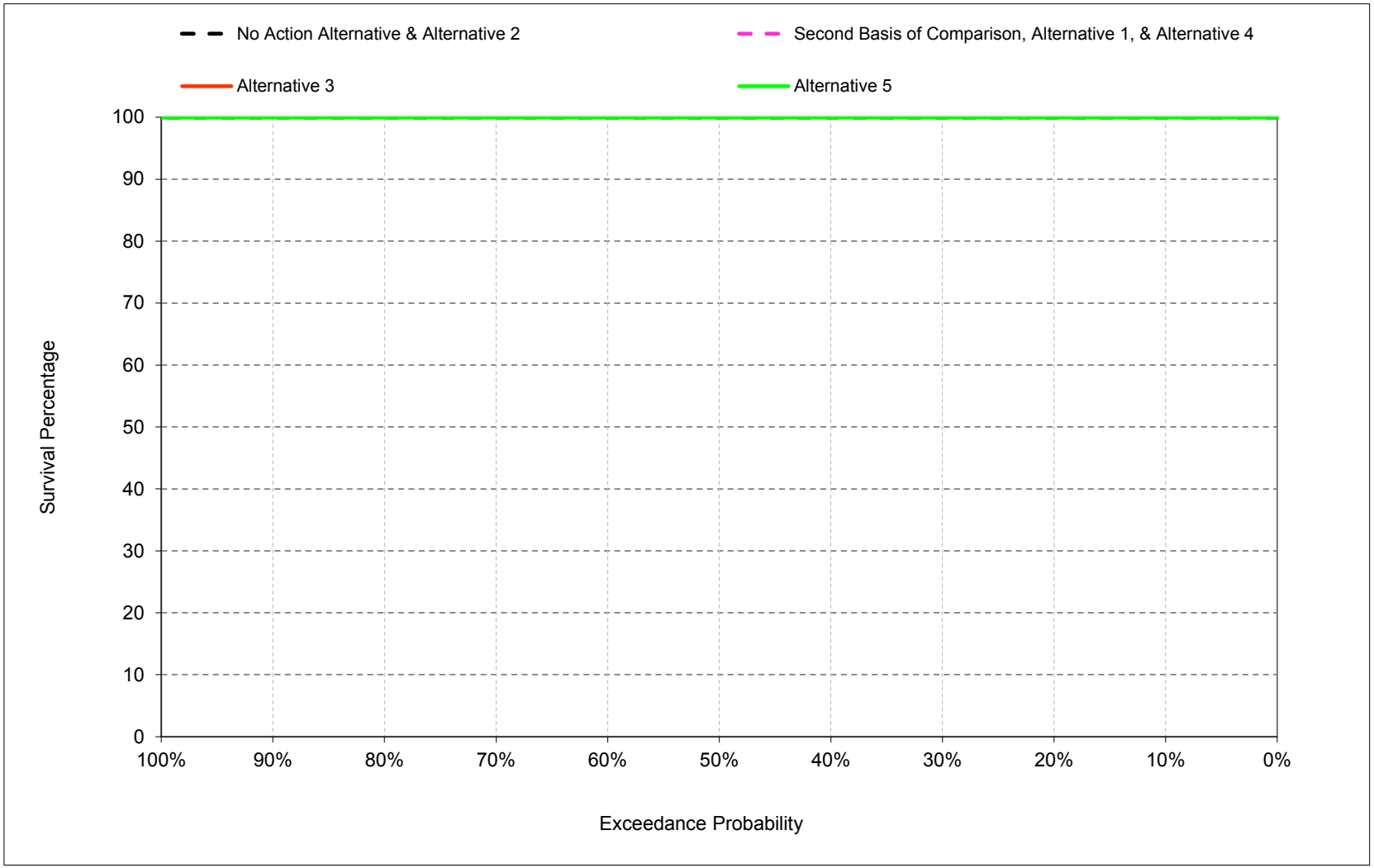
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

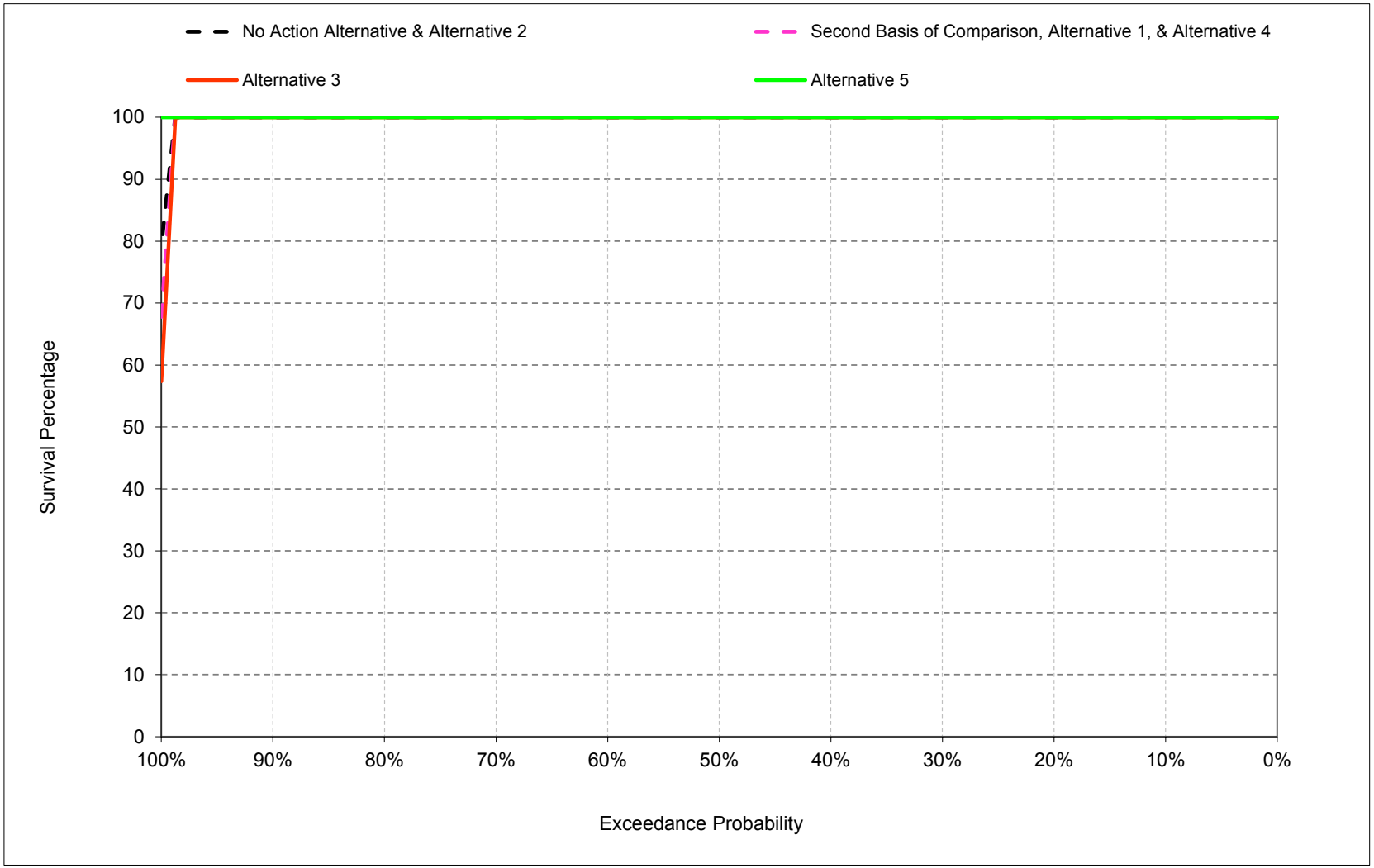
B.10. Folsom Large Mouth Bass Survival Percentage

Figure B-10-1. Folsom Large Mouth Bass Nest Survival Percentage, March



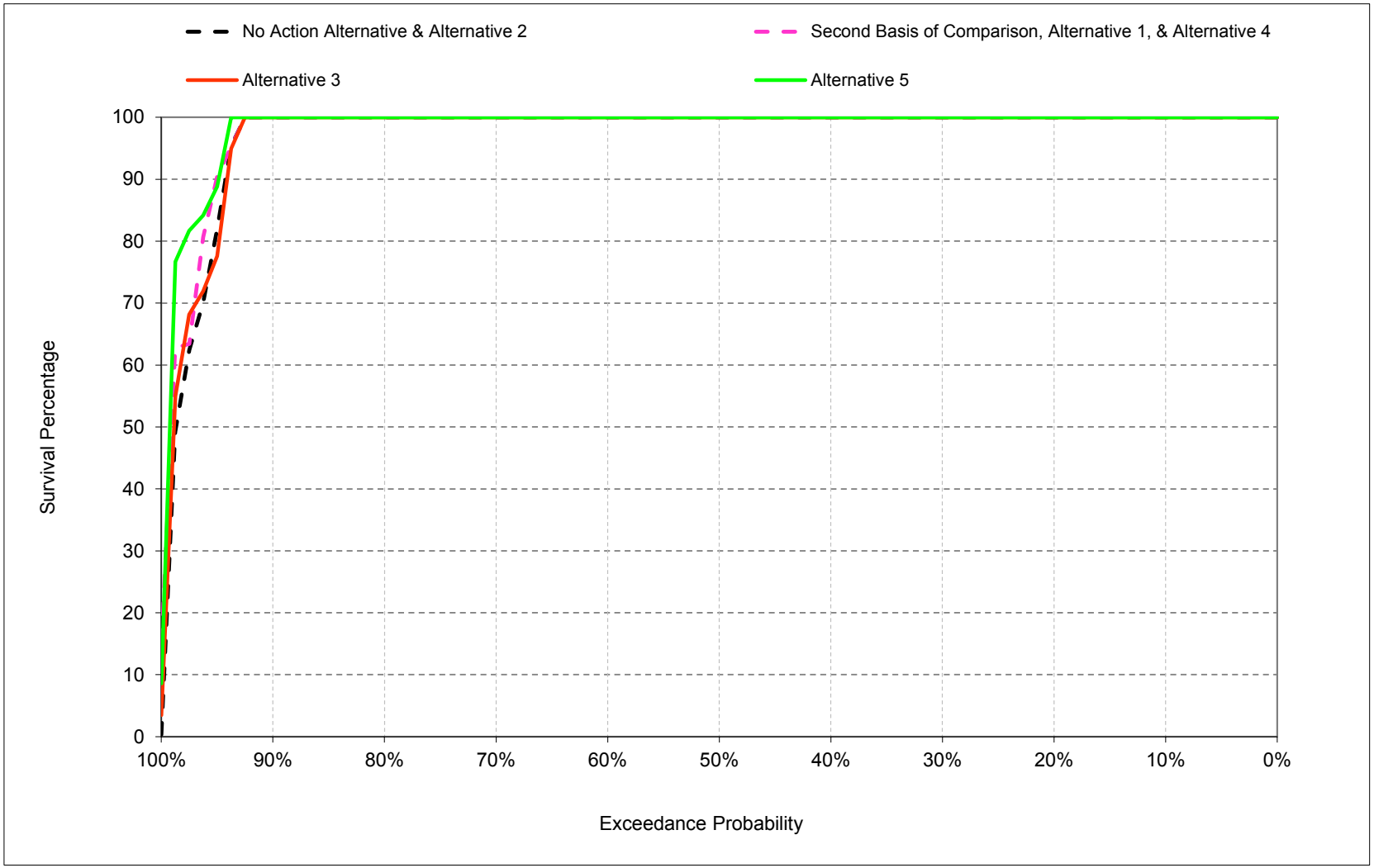
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-10-2. Folsom Large Mouth Bass Nest Survival Percentage, April



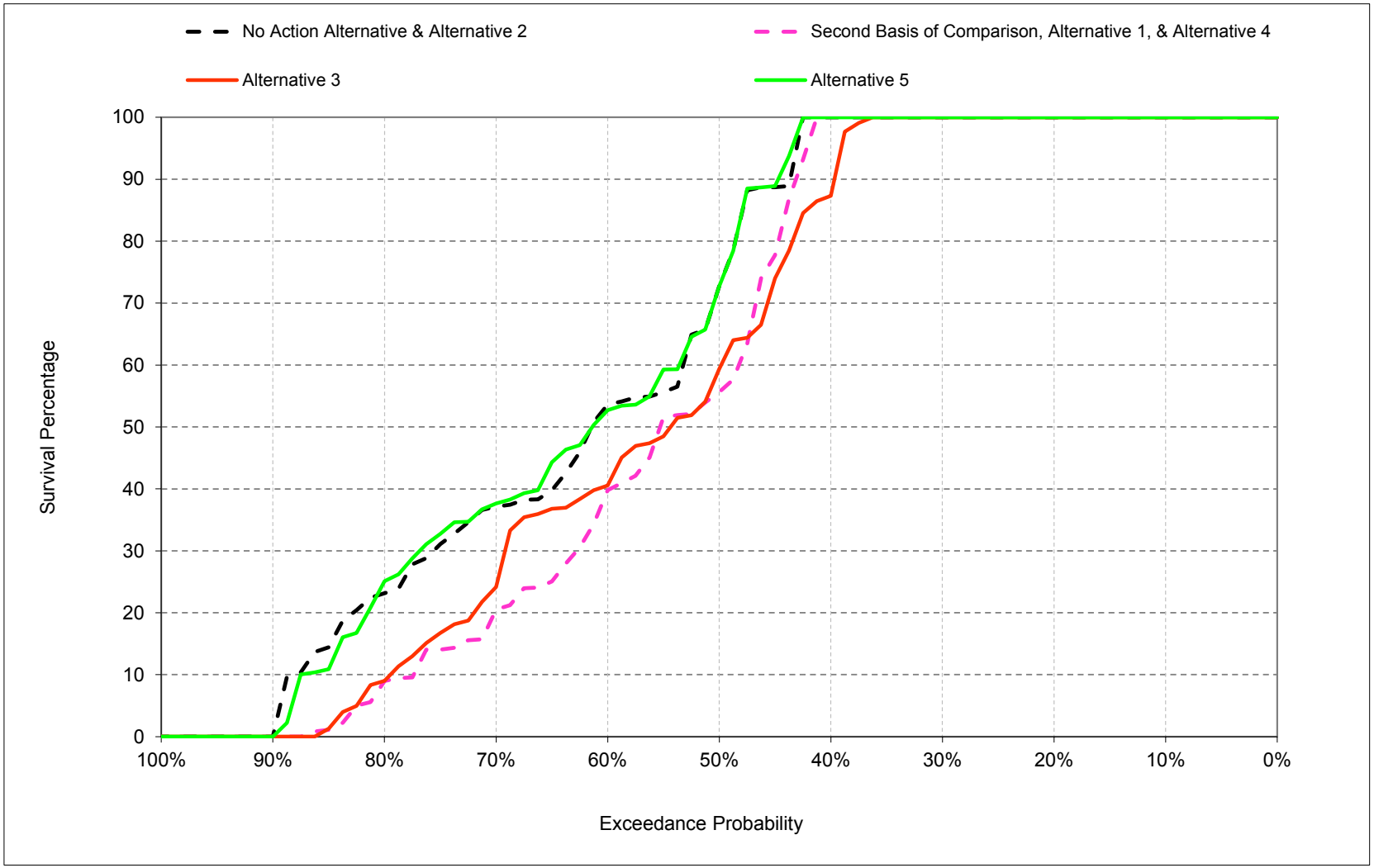
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-10-3. Folsom Large Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-10-4. Folsom Large Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-10-1. Folsom Large Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	69
60%	100	100	100	52
70%	100	100	100	37
80%	100	100	100	23
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	100	99	96	63
Water Year Types[c]				
Wet (32%)	100	100	100	93
Above Normal (16%)	100	100	100	61
Below Normal (13%)	100	100	100	61
Dry (24%)	100	100	94	35
Critical (15%)	97	93	82	46

Alternative 1

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	55
60%	100	100	100	37
70%	100	100	100	17
80%	100	100	100	6
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	100	99	96	56
Water Year Types[c]				
Wet (32%)	100	100	100	90
Above Normal (16%)	100	100	100	45
Below Normal (13%)	100	100	100	35
Dry (24%)	100	100	96	32
Critical (15%)	97	92	83	55

Alternative 1 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	-14
60%	0	0	0	-15
70%	0	0	0	-20
80%	0	0	0	-16
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	0	1	-7
Water Year Types[c]				
Wet (32%)	0	0	0	-3
Above Normal (16%)	0	0	0	-16
Below Normal (13%)	0	0	0	-26
Dry (24%)	0	0	2	-3
Critical (15%)	0	-1	1	9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-10-2. Folsom Large Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	69
60%	100	100	100	52
70%	100	100	100	37
80%	100	100	100	23
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	100	99	96	63
Water Year Types[c]				
Wet (32%)	100	100	100	93
Above Normal (16%)	100	100	100	61
Below Normal (13%)	100	100	100	61
Dry (24%)	100	100	94	35
Critical (15%)	97	93	82	46

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	87
50%	100	100	100	57
60%	100	100	100	40
70%	100	100	100	22
80%	100	100	100	8
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	99	99	96	57
Water Year Types[c]				
Wet (32%)	100	100	100	85
Above Normal (16%)	100	100	100	45
Below Normal (13%)	100	100	98	50
Dry (24%)	100	100	96	34
Critical (15%)	96	91	81	54

Alternative 3 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	-13
50%	0	0	0	-13
60%	0	0	0	-12
70%	0	0	0	-14
80%	0	0	0	-14
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	0	0	-6
Water Year Types[c]				
Wet (32%)	0	0	0	-8
Above Normal (16%)	0	0	0	-16
Below Normal (13%)	0	0	-2	-11
Dry (24%)	0	0	2	-1
Critical (15%)	-1	-2	-1	8

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-10-3. Folsom Large Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	69
60%	100	100	100	52
70%	100	100	100	37
80%	100	100	100	23
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	100	99	96	63
Water Year Types[c]				
Wet (32%)	100	100	100	93
Above Normal (16%)	100	100	100	61
Below Normal (13%)	100	100	100	61
Dry (24%)	100	100	94	35
Critical (15%)	97	93	82	46

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	69
60%	100	100	100	51
70%	100	100	100	37
80%	100	100	100	22
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	100	99	97	63
Water Year Types[c]				
Wet (32%)	100	100	100	93
Above Normal (16%)	100	100	100	61
Below Normal (13%)	100	100	100	62
Dry (24%)	100	100	97	37
Critical (15%)	97	95	83	43

Alternative 5 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	-1
70%	0	0	0	0
80%	0	0	0	-1
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	0	1	0
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	0	1
Dry (24%)	0	0	3	2
Critical (15%)	0	2	1	-3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-10-4. Folsom Large Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	55
60%	100	100	100	37
70%	100	100	100	17
80%	100	100	100	6
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	100	99	96	56
Water Year Types[c]				
Wet (32%)	100	100	100	90
Above Normal (16%)	100	100	100	45
Below Normal (13%)	100	100	100	35
Dry (24%)	100	100	96	32
Critical (15%)	97	92	83	55

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	69
60%	100	100	100	52
70%	100	100	100	37
80%	100	100	100	23
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	100	99	96	63
Water Year Types[c]				
Wet (32%)	100	100	100	93
Above Normal (16%)	100	100	100	61
Below Normal (13%)	100	100	100	61
Dry (24%)	100	100	94	35
Critical (15%)	97	93	82	46

No Action Alternative minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	14
60%	0	0	0	15
70%	0	0	0	20
80%	0	0	0	16
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	0	-1	7
Water Year Types[c]				
Wet (32%)	0	0	0	3
Above Normal (16%)	0	0	0	16
Below Normal (13%)	0	0	0	26
Dry (24%)	0	0	-2	3
Critical (15%)	0	1	-1	-9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-10-5. Folsom Large Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	55
60%	100	100	100	37
70%	100	100	100	17
80%	100	100	100	6
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	100	99	96	56
Water Year Types[c]				
Wet (32%)	100	100	100	90
Above Normal (16%)	100	100	100	45
Below Normal (13%)	100	100	100	35
Dry (24%)	100	100	96	32
Critical (15%)	97	92	83	55

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	87
50%	100	100	100	57
60%	100	100	100	40
70%	100	100	100	22
80%	100	100	100	8
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	99	99	96	57
Water Year Types[c]				
Wet (32%)	100	100	100	85
Above Normal (16%)	100	100	100	45
Below Normal (13%)	100	100	98	50
Dry (24%)	100	100	96	34
Critical (15%)	96	91	81	54

Alternative 3 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	-13
50%	0	0	0	2
60%	0	0	0	4
70%	0	0	0	5
80%	0	0	0	2
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	0	0	1
Water Year Types[c]				
Wet (32%)	0	0	0	-5
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	-2	15
Dry (24%)	0	0	0	2
Critical (15%)	-1	-1	-2	-1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-10-6. Folsom Large Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	55
60%	100	100	100	37
70%	100	100	100	17
80%	100	100	100	6
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	100	99	96	56
Water Year Types[c]				
Wet (32%)	100	100	100	90
Above Normal (16%)	100	100	100	45
Below Normal (13%)	100	100	100	35
Dry (24%)	100	100	96	32
Critical (15%)	97	92	83	55

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	69
60%	100	100	100	51
70%	100	100	100	37
80%	100	100	100	22
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	100	99	97	63
Water Year Types[c]				
Wet (32%)	100	100	100	93
Above Normal (16%)	100	100	100	61
Below Normal (13%)	100	100	100	62
Dry (24%)	100	100	97	37
Critical (15%)	97	95	83	43

Alternative 5 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	14
60%	0	0	0	15
70%	0	0	0	20
80%	0	0	0	15
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	0	0	7
Water Year Types[c]				
Wet (32%)	0	0	0	3
Above Normal (16%)	0	0	0	17
Below Normal (13%)	0	0	0	27
Dry (24%)	0	0	2	4
Critical (15%)	0	3	0	-12

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

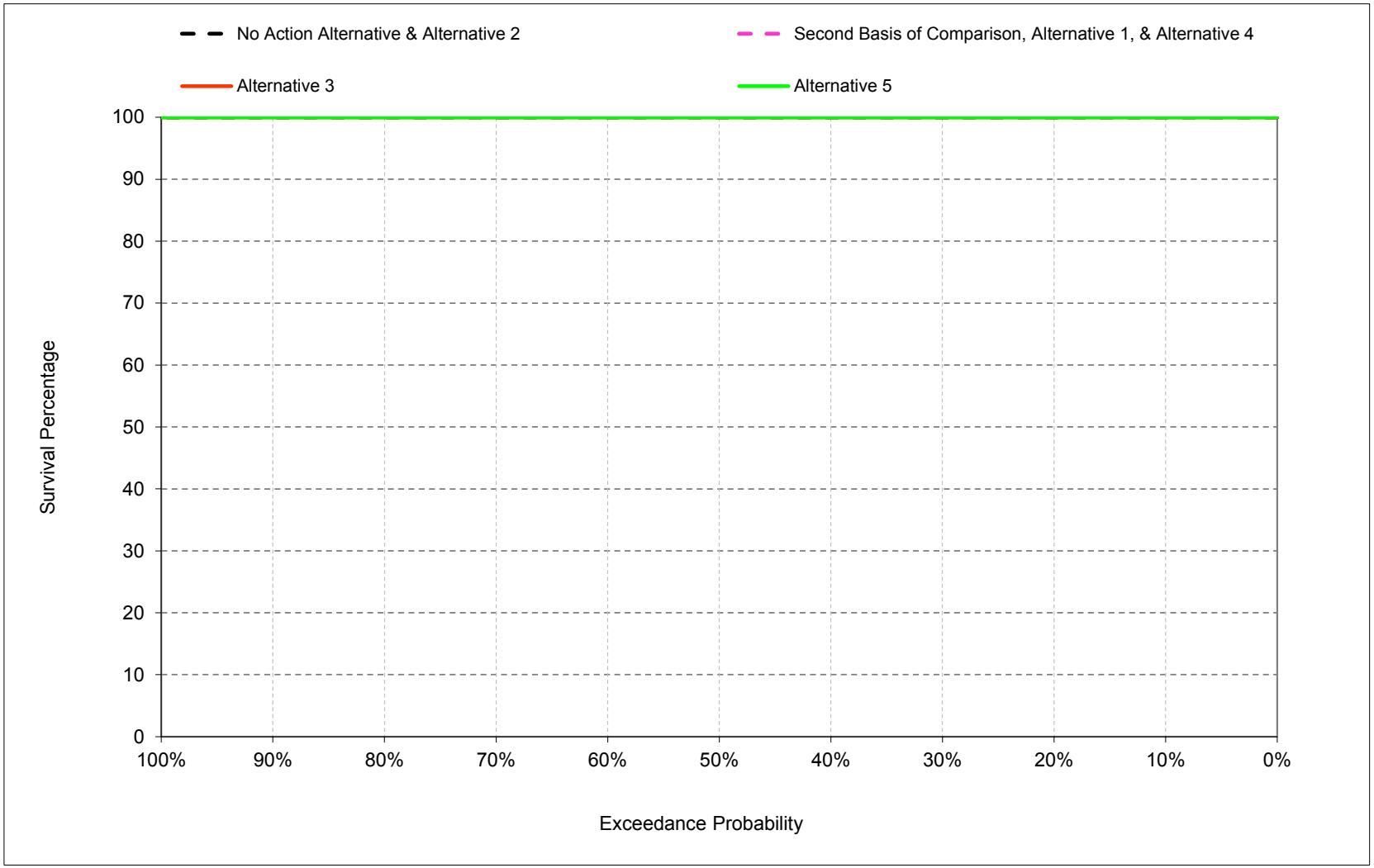
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

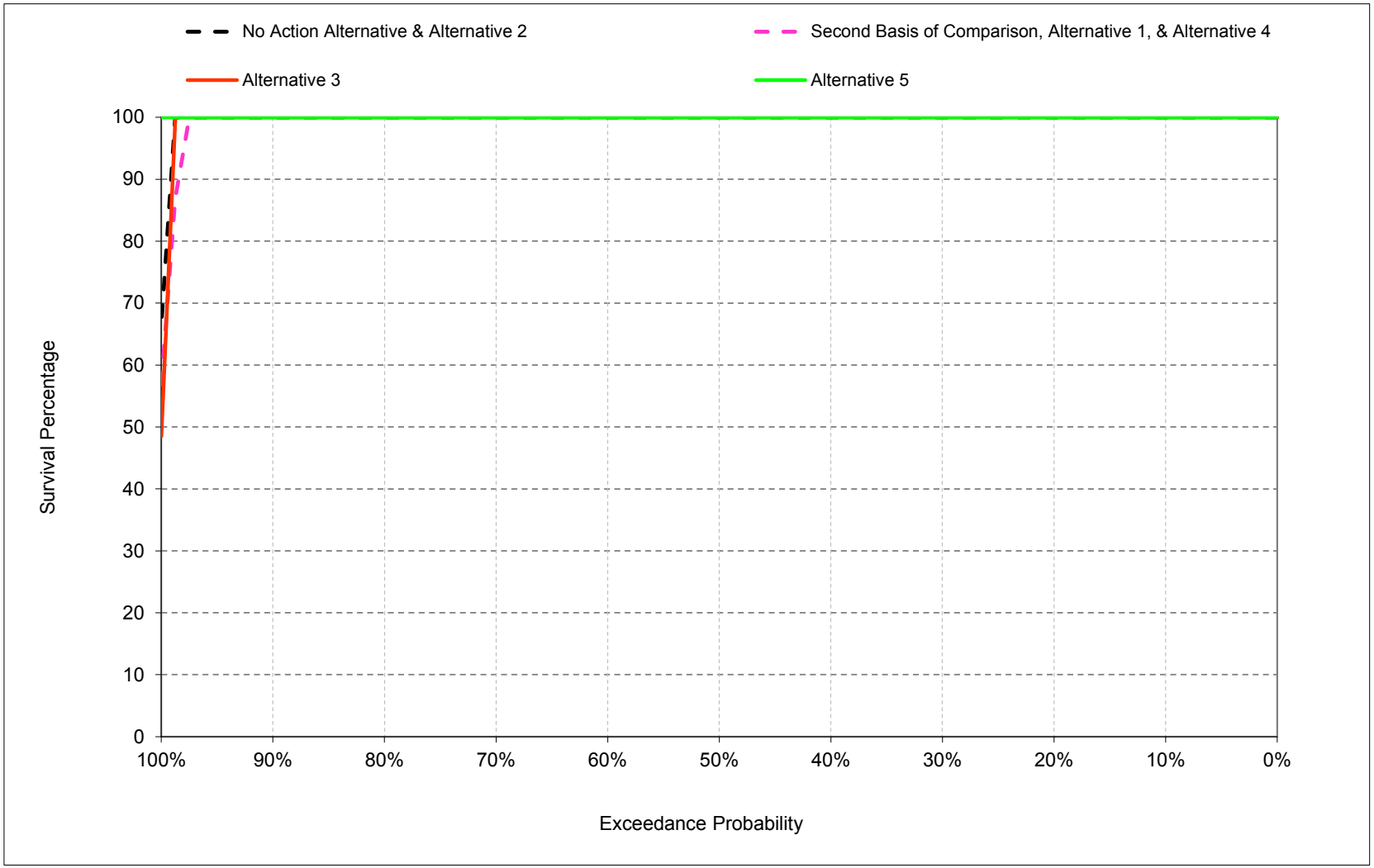
B.11. Folsom Small Mouth Bass Survival Percentage

Figure B-11-1. Folsom Small Mouth Bass Nest Survival Percentage, March



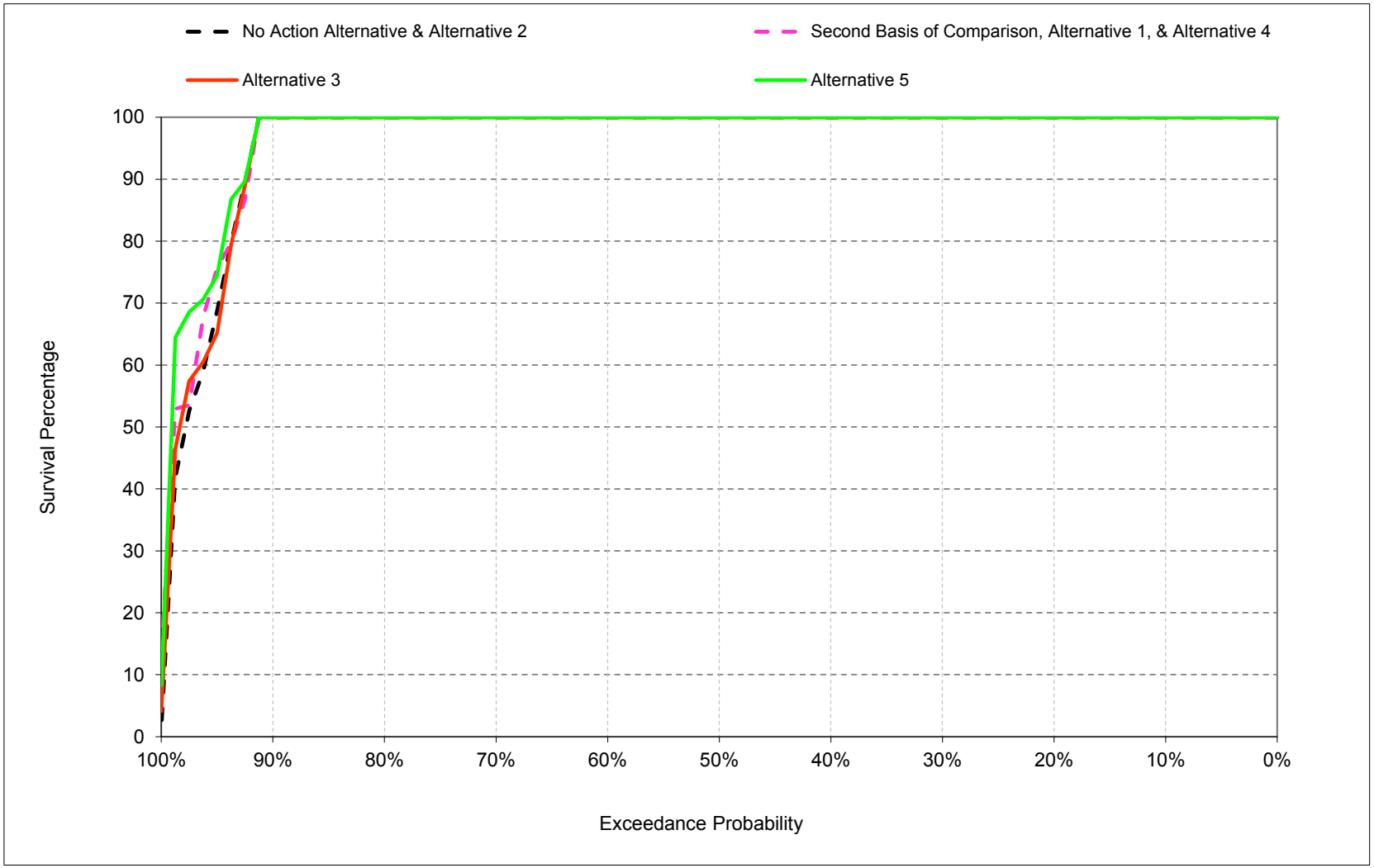
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-11-2. Folsom Small Mouth Bass Nest Survival Percentage, April



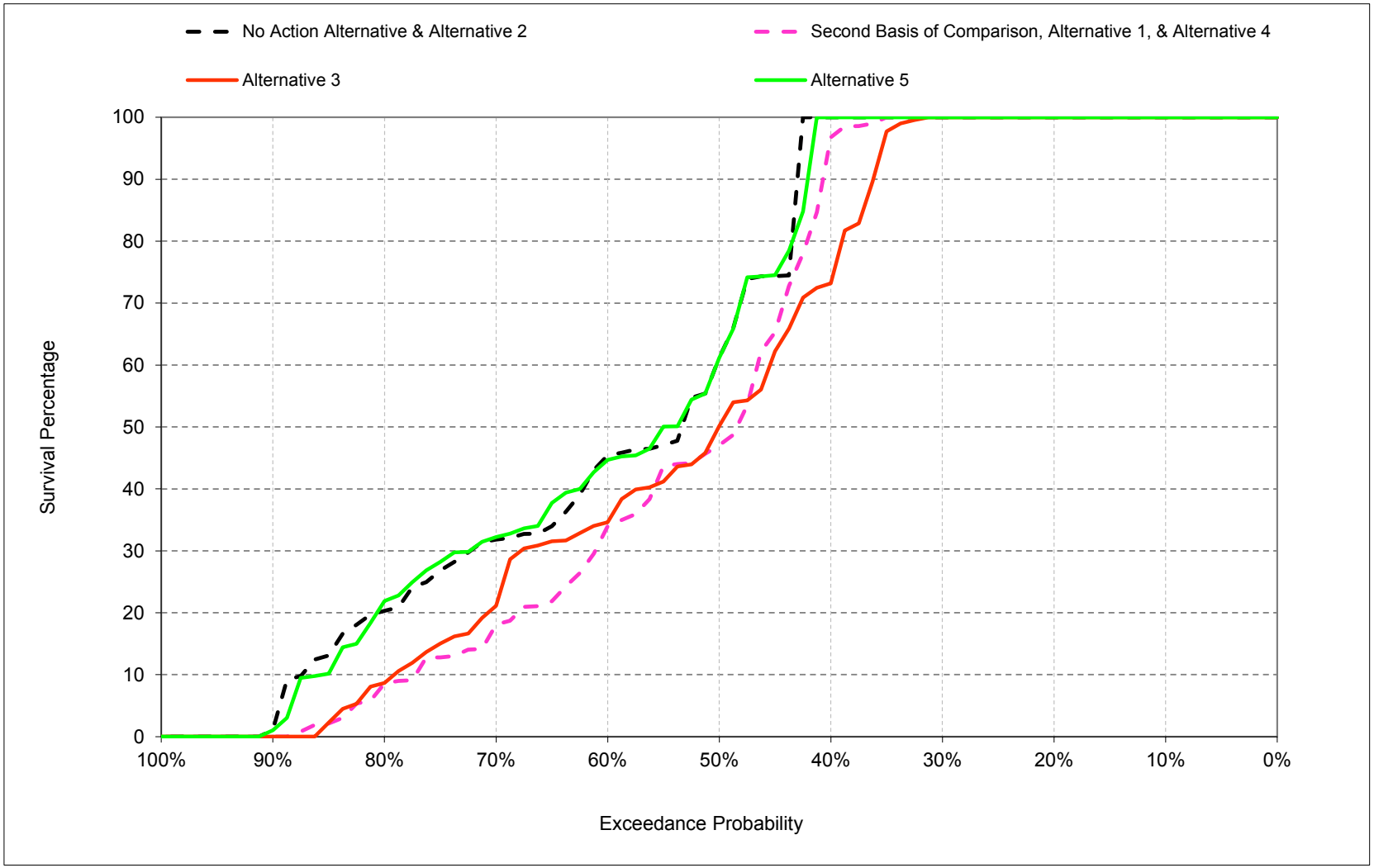
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-11-3. Folsom Small Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-11-4. Folsom Small Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-11-1. Folsom Small Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	58
60%	100	100	100	44
70%	100	100	100	32
80%	100	100	100	20
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	99	99	95	60
Water Year Types[c]				
Wet (32%)	100	100	100	92
Above Normal (16%)	100	100	100	58
Below Normal (13%)	100	100	98	57
Dry (24%)	100	100	93	32
Critical (15%)	96	92	80	41

Alternative 1

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	92
50%	100	100	100	46
60%	100	100	100	31
70%	100	100	100	15
80%	100	100	100	6
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	99	99	95	54
Water Year Types[c]				
Wet (32%)	100	100	100	89
Above Normal (16%)	100	100	100	43
Below Normal (13%)	100	100	98	34
Dry (24%)	100	100	94	29
Critical (15%)	96	90	81	50

Alternative 1 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	-8
50%	0	0	0	-12
60%	0	0	0	-13
70%	0	0	0	-16
80%	0	0	0	-13
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	0	0	-6
Water Year Types[c]				
Wet (32%)	0	0	0	-3
Above Normal (16%)	0	0	0	-15
Below Normal (13%)	0	0	0	-24
Dry (24%)	0	0	1	-2
Critical (15%)	0	-2	1	9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-11-2. Folsom Small Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	58
60%	100	100	100	44
70%	100	100	100	32
80%	100	100	100	20
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	99	99	95	60
Water Year Types[c]				
Wet (32%)	100	100	100	92
Above Normal (16%)	100	100	100	58
Below Normal (13%)	100	100	98	57
Dry (24%)	100	100	93	32
Critical (15%)	96	92	80	41

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	73
50%	100	100	100	48
60%	100	100	100	34
70%	100	100	100	20
80%	100	100	100	8
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	99	99	95	54
Water Year Types[c]				
Wet (32%)	100	100	100	82
Above Normal (16%)	100	100	100	43
Below Normal (13%)	100	100	97	46
Dry (24%)	100	100	94	31
Critical (15%)	95	90	79	50

Alternative 3 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	-27
50%	0	0	0	-10
60%	0	0	0	-10
70%	0	0	0	-12
80%	0	0	0	-12
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	0	0	-6
Water Year Types[c]				
Wet (32%)	0	0	0	-10
Above Normal (16%)	0	0	0	-15
Below Normal (13%)	0	0	-1	-12
Dry (24%)	0	0	2	-1
Critical (15%)	-1	-2	-1	8

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-11-3. Folsom Small Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	58
60%	100	100	100	44
70%	100	100	100	32
80%	100	100	100	20
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	99	99	95	60
Water Year Types[c]				
Wet (32%)	100	100	100	92
Above Normal (16%)	100	100	100	58
Below Normal (13%)	100	100	98	57
Dry (24%)	100	100	93	32
Critical (15%)	96	92	80	41

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	58
60%	100	100	100	43
70%	100	100	100	32
80%	100	100	100	19
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	99	99	96	60
Water Year Types[c]				
Wet (32%)	100	100	100	92
Above Normal (16%)	100	100	100	58
Below Normal (13%)	100	100	99	58
Dry (24%)	100	100	95	33
Critical (15%)	96	95	81	38

Alternative 5 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	-1
70%	0	0	0	0
80%	0	0	0	-1
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	0	1	0
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	1	1
Dry (24%)	0	0	3	1
Critical (15%)	0	3	1	-4

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-11-4. Folsom Small Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	92
50%	100	100	100	46
60%	100	100	100	31
70%	100	100	100	15
80%	100	100	100	6
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	99	99	95	54
Water Year Types[c]				
Wet (32%)	100	100	100	89
Above Normal (16%)	100	100	100	43
Below Normal (13%)	100	100	98	34
Dry (24%)	100	100	94	29
Critical (15%)	96	90	81	50

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	58
60%	100	100	100	44
70%	100	100	100	32
80%	100	100	100	20
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	99	99	95	60
Water Year Types[c]				
Wet (32%)	100	100	100	92
Above Normal (16%)	100	100	100	58
Below Normal (13%)	100	100	98	57
Dry (24%)	100	100	93	32
Critical (15%)	96	92	80	41

No Action Alternative minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	8
50%	0	0	0	12
60%	0	0	0	13
70%	0	0	0	16
80%	0	0	0	13
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	0	0	6
Water Year Types[c]				
Wet (32%)	0	0	0	3
Above Normal (16%)	0	0	0	15
Below Normal (13%)	0	0	0	24
Dry (24%)	0	0	-1	2
Critical (15%)	0	2	-1	-9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-11-5. Folsom Small Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	92
50%	100	100	100	46
60%	100	100	100	31
70%	100	100	100	15
80%	100	100	100	6
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	99	99	95	54
Water Year Types[c]				
Wet (32%)	100	100	100	89
Above Normal (16%)	100	100	100	43
Below Normal (13%)	100	100	98	34
Dry (24%)	100	100	94	29
Critical (15%)	96	90	81	50

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	73
50%	100	100	100	48
60%	100	100	100	34
70%	100	100	100	20
80%	100	100	100	8
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	99	99	95	54
Water Year Types[c]				
Wet (32%)	100	100	100	82
Above Normal (16%)	100	100	100	43
Below Normal (13%)	100	100	97	46
Dry (24%)	100	100	94	31
Critical (15%)	95	90	79	50

Alternative 3 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	-19
50%	0	0	0	2
60%	0	0	0	3
70%	0	0	0	4
80%	0	0	0	2
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	0	0	0
Water Year Types[c]				
Wet (32%)	0	0	0	-6
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	-1	12
Dry (24%)	0	0	0	2
Critical (15%)	-1	0	-1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-11-6. Folsom Small Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	92
50%	100	100	100	46
60%	100	100	100	31
70%	100	100	100	15
80%	100	100	100	6
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	99	99	95	54
Water Year Types[c]				
Wet (32%)	100	100	100	89
Above Normal (16%)	100	100	100	43
Below Normal (13%)	100	100	98	34
Dry (24%)	100	100	94	29
Critical (15%)	96	90	81	50

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	58
60%	100	100	100	43
70%	100	100	100	32
80%	100	100	100	19
90%	100	100	100	0
Long Term				
Full Simulation Period[b]	99	99	96	60
Water Year Types[c]				
Wet (32%)	100	100	100	92
Above Normal (16%)	100	100	100	58
Below Normal (13%)	100	100	99	58
Dry (24%)	100	100	95	33
Critical (15%)	96	95	81	38

Alternative 5 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	8
50%	0	0	0	12
60%	0	0	0	12
70%	0	0	0	16
80%	0	0	0	13
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	1	0	6
Water Year Types[c]				
Wet (32%)	0	0	0	3
Above Normal (16%)	0	0	0	15
Below Normal (13%)	0	0	1	24
Dry (24%)	0	0	1	4
Critical (15%)	0	5	1	-12

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

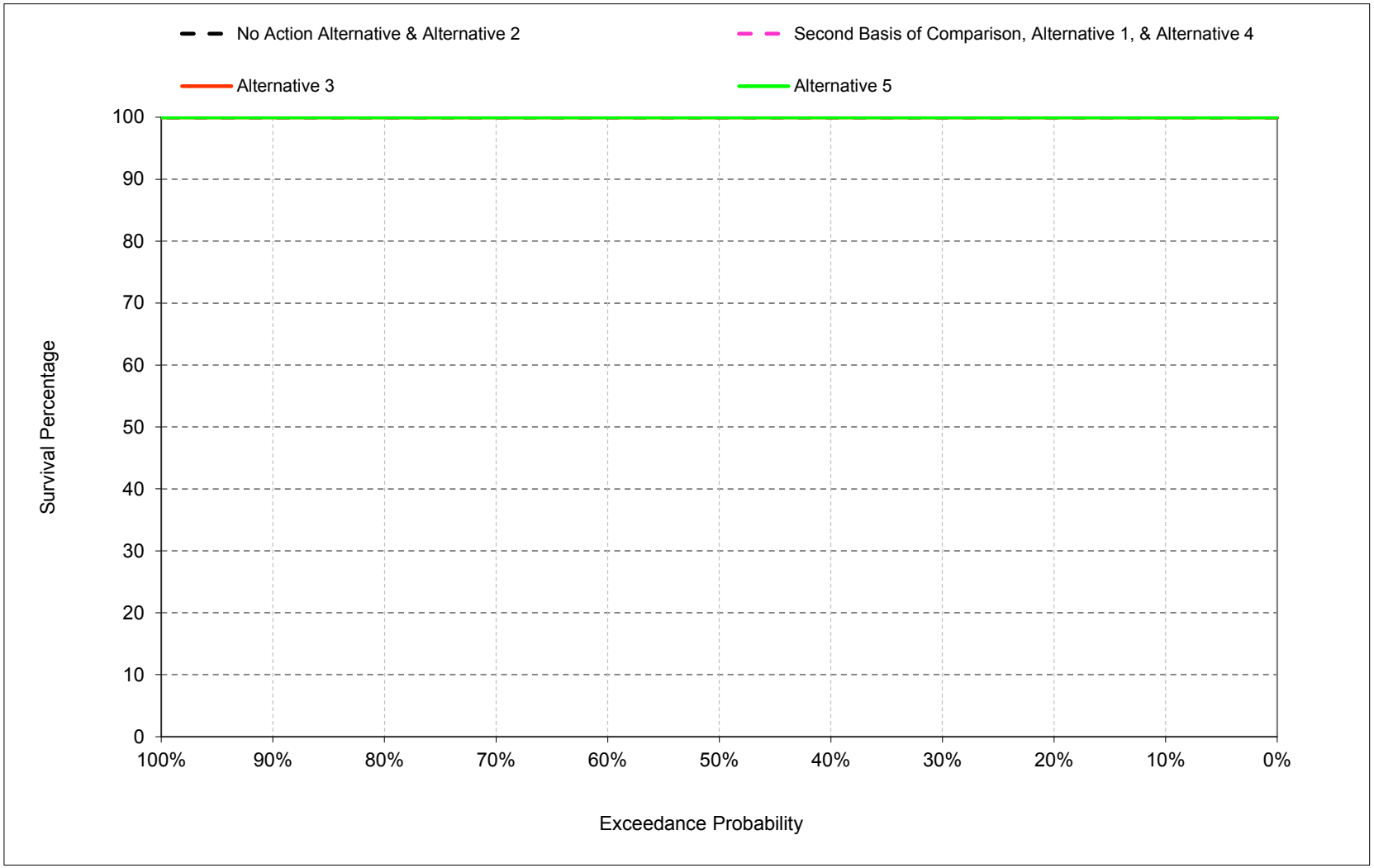
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

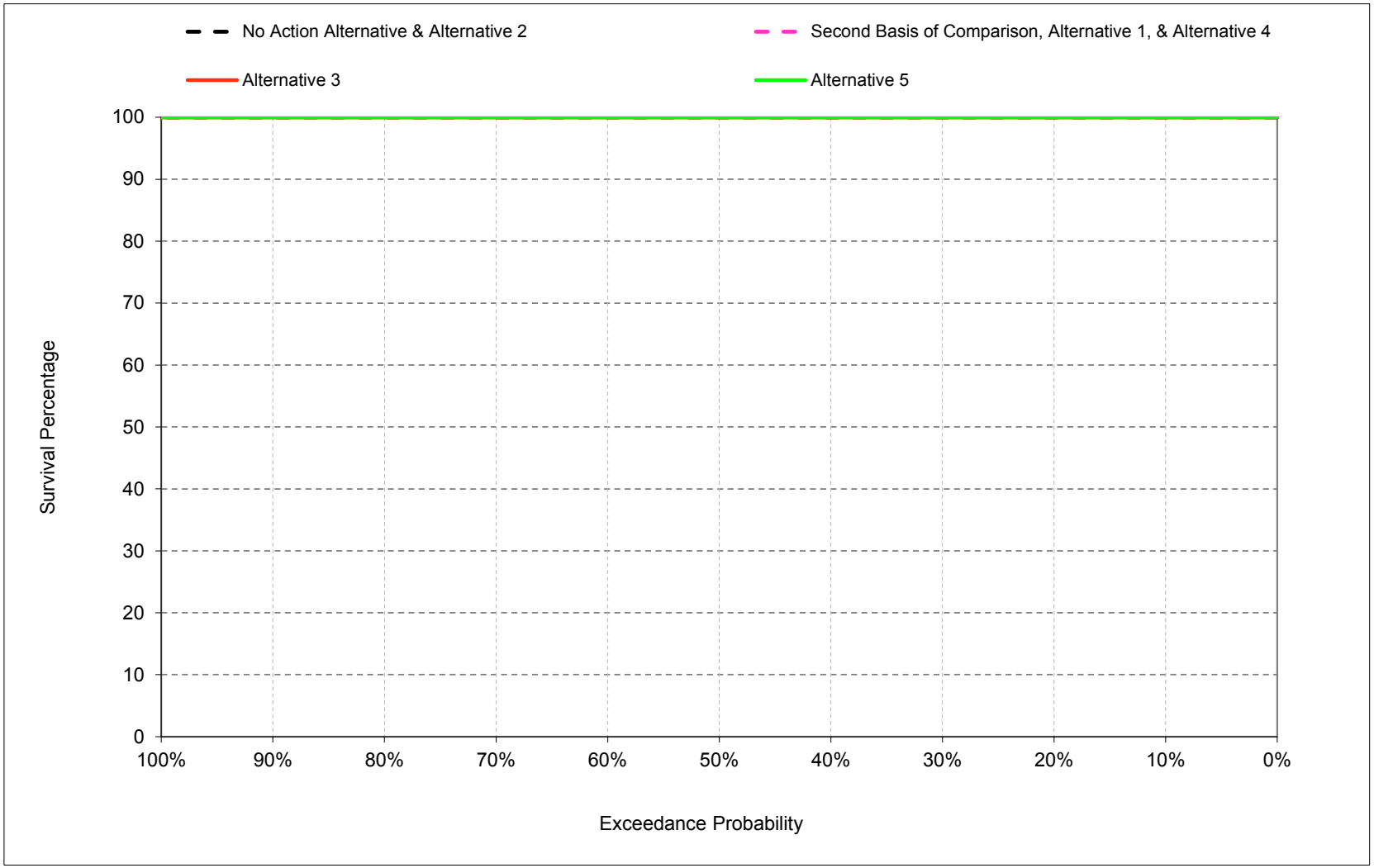
B.12. Folsom Spotted Bass Survival Percentage

Figure B-12-1. Folsom Spotted Bass Nest Survival Percentage, March



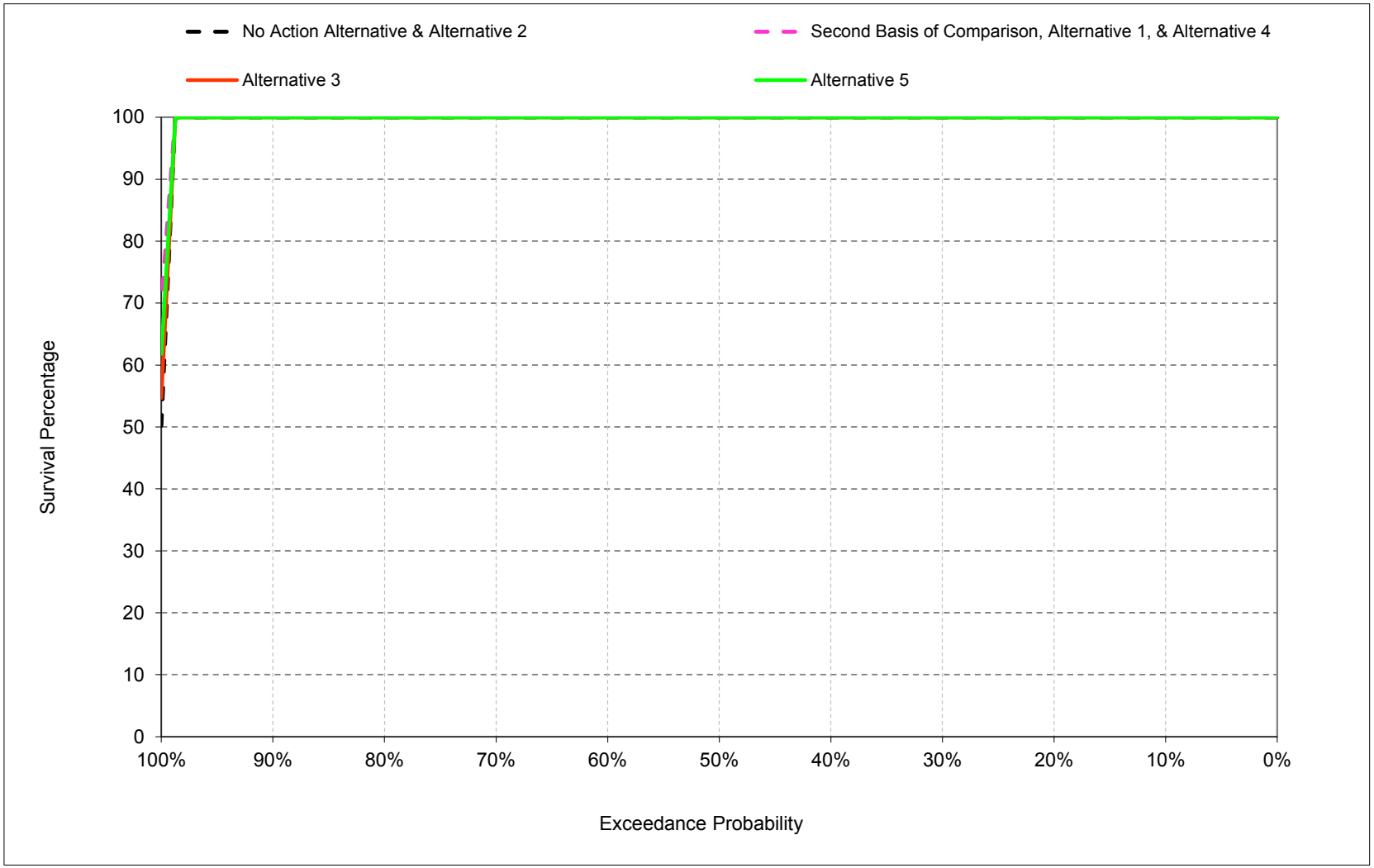
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-12-2. Folsom Spotted Bass Nest Survival Percentage, April



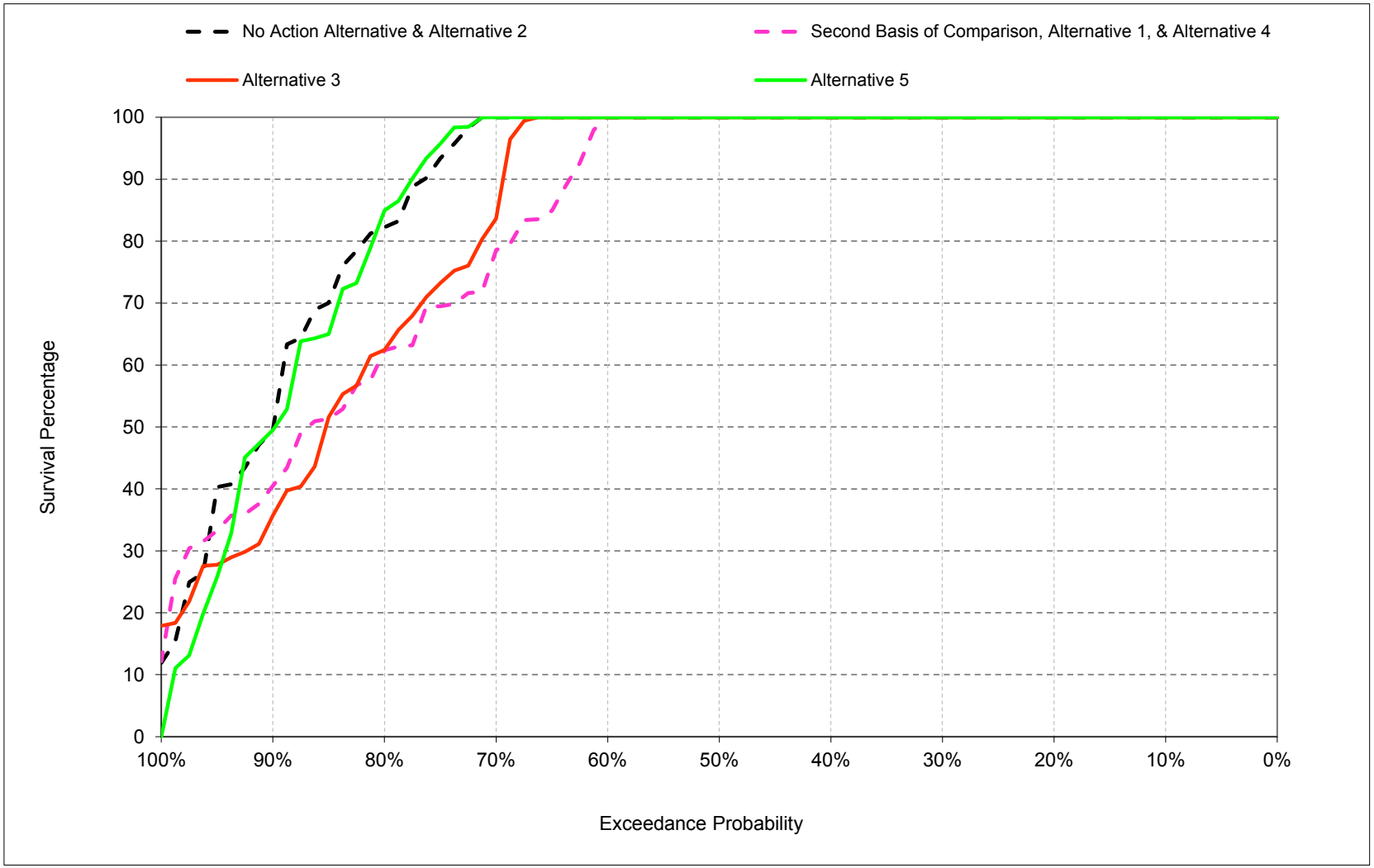
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-12-3. Folsom Spotted Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-12-4. Folsom Spotted Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-12-1. Folsom Spotted Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	81
90%	100	100	100	47
Long Term				
Full Simulation Period[b]	100	100	99	88
Water Year Types[c]				
Wet (32%)	100	100	100	100
Above Normal (16%)	100	100	100	94
Below Normal (13%)	100	100	100	90
Dry (24%)	100	100	100	73
Critical (15%)	100	100	91	80

Alternative 1

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	99
70%	100	100	100	74
80%	100	100	100	59
90%	100	100	100	38
Long Term				
Full Simulation Period[b]	100	100	99	83
Water Year Types[c]				
Wet (32%)	100	100	100	99
Above Normal (16%)	100	100	100	78
Below Normal (13%)	100	100	100	68
Dry (24%)	100	100	100	72
Critical (15%)	100	100	93	85

Alternative 1 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	-1
70%	0	0	0	-26
80%	0	0	0	-23
90%	0	0	0	-9
Long Term				
Full Simulation Period[b]	0	0	0	-6
Water Year Types[c]				
Wet (32%)	0	0	0	-1
Above Normal (16%)	0	0	0	-16
Below Normal (13%)	0	0	0	-22
Dry (24%)	0	0	0	-1
Critical (15%)	0	0	2	4

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-12-2. Folsom Spotted Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	81
90%	100	100	100	47
Long Term				
Full Simulation Period[b]	100	100	99	88
Water Year Types[c]				
Wet (32%)	100	100	100	100
Above Normal (16%)	100	100	100	94
Below Normal (13%)	100	100	100	90
Dry (24%)	100	100	100	73
Critical (15%)	100	100	91	80

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	81
80%	100	100	100	62
90%	100	100	100	32
Long Term				
Full Simulation Period[b]	100	100	99	84
Water Year Types[c]				
Wet (32%)	100	100	100	98
Above Normal (16%)	100	100	100	75
Below Normal (13%)	100	100	100	84
Dry (24%)	100	100	100	70
Critical (15%)	100	100	91	83

Alternative 3 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	-19
80%	0	0	0	-20
90%	0	0	0	-16
Long Term				
Full Simulation Period[b]	0	0	0	-5
Water Year Types[c]				
Wet (32%)	0	0	0	-2
Above Normal (16%)	0	0	0	-19
Below Normal (13%)	0	0	0	-6
Dry (24%)	0	0	0	-3
Critical (15%)	0	0	0	3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-12-3. Folsom Spotted Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	81
90%	100	100	100	47
Long Term				
Full Simulation Period[b]	100	100	99	88
Water Year Types[c]				
Wet (32%)	100	100	100	100
Above Normal (16%)	100	100	100	94
Below Normal (13%)	100	100	100	90
Dry (24%)	100	100	100	73
Critical (15%)	100	100	91	80

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	80
90%	100	100	100	48
Long Term				
Full Simulation Period[b]	100	100	99	87
Water Year Types[c]				
Wet (32%)	100	100	100	100
Above Normal (16%)	100	100	100	94
Below Normal (13%)	100	100	100	91
Dry (24%)	100	100	100	73
Critical (15%)	100	100	94	73

Alternative 5 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	-1
90%	0	0	0	0
Long Term				
Full Simulation Period[b]	0	0	0	-1
Water Year Types[c]				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	0	0
Dry (24%)	0	0	0	0
Critical (15%)	0	0	3	-7

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-12-4. Folsom Spotted Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	99
70%	100	100	100	74
80%	100	100	100	59
90%	100	100	100	38
Long Term				
Full Simulation Period[b]	100	100	99	83
Water Year Types[c]				
Wet (32%)	100	100	100	99
Above Normal (16%)	100	100	100	78
Below Normal (13%)	100	100	100	68
Dry (24%)	100	100	100	72
Critical (15%)	100	100	93	85

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	81
90%	100	100	100	47
Long Term				
Full Simulation Period[b]	100	100	99	88
Water Year Types[c]				
Wet (32%)	100	100	100	100
Above Normal (16%)	100	100	100	94
Below Normal (13%)	100	100	100	90
Dry (24%)	100	100	100	73
Critical (15%)	100	100	91	80

No Action Alternative minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	1
70%	0	0	0	26
80%	0	0	0	23
90%	0	0	0	9
Long Term				
Full Simulation Period[b]	0	0	0	6
Water Year Types[c]				
Wet (32%)	0	0	0	1
Above Normal (16%)	0	0	0	16
Below Normal (13%)	0	0	0	22
Dry (24%)	0	0	0	1
Critical (15%)	0	0	-2	-4

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-12-5. Folsom Spotted Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	99
70%	100	100	100	74
80%	100	100	100	59
90%	100	100	100	38
Long Term				
Full Simulation Period[b]	100	100	99	83
Water Year Types[c]				
Wet (32%)	100	100	100	99
Above Normal (16%)	100	100	100	78
Below Normal (13%)	100	100	100	68
Dry (24%)	100	100	100	72
Critical (15%)	100	100	93	85

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	81
80%	100	100	100	62
90%	100	100	100	32
Long Term				
Full Simulation Period[b]	100	100	99	84
Water Year Types[c]				
Wet (32%)	100	100	100	98
Above Normal (16%)	100	100	100	75
Below Normal (13%)	100	100	100	84
Dry (24%)	100	100	100	70
Critical (15%)	100	100	91	83

Alternative 3 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	1
70%	0	0	0	7
80%	0	0	0	3
90%	0	0	0	-6
Long Term				
Full Simulation Period[b]	0	0	0	1
Water Year Types[c]				
Wet (32%)	0	0	0	-1
Above Normal (16%)	0	0	0	-3
Below Normal (13%)	0	0	0	16
Dry (24%)	0	0	0	-2
Critical (15%)	0	0	-2	-1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-12-6. Folsom Spotted Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	99
70%	100	100	100	74
80%	100	100	100	59
90%	100	100	100	38
Long Term				
Full Simulation Period[b]	100	100	99	83
Water Year Types[c]				
Wet (32%)	100	100	100	99
Above Normal (16%)	100	100	100	78
Below Normal (13%)	100	100	100	68
Dry (24%)	100	100	100	72
Critical (15%)	100	100	93	85

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	80
90%	100	100	100	48
Long Term				
Full Simulation Period[b]	100	100	99	87
Water Year Types[c]				
Wet (32%)	100	100	100	100
Above Normal (16%)	100	100	100	94
Below Normal (13%)	100	100	100	91
Dry (24%)	100	100	100	73
Critical (15%)	100	100	94	73

Alternative 5 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	1
70%	0	0	0	26
80%	0	0	0	22
90%	0	0	0	10
Long Term				
Full Simulation Period[b]	0	0	0	5
Water Year Types[c]				
Wet (32%)	0	0	0	1
Above Normal (16%)	0	0	0	16
Below Normal (13%)	0	0	0	23
Dry (24%)	0	0	0	1
Critical (15%)	0	0	1	-11

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

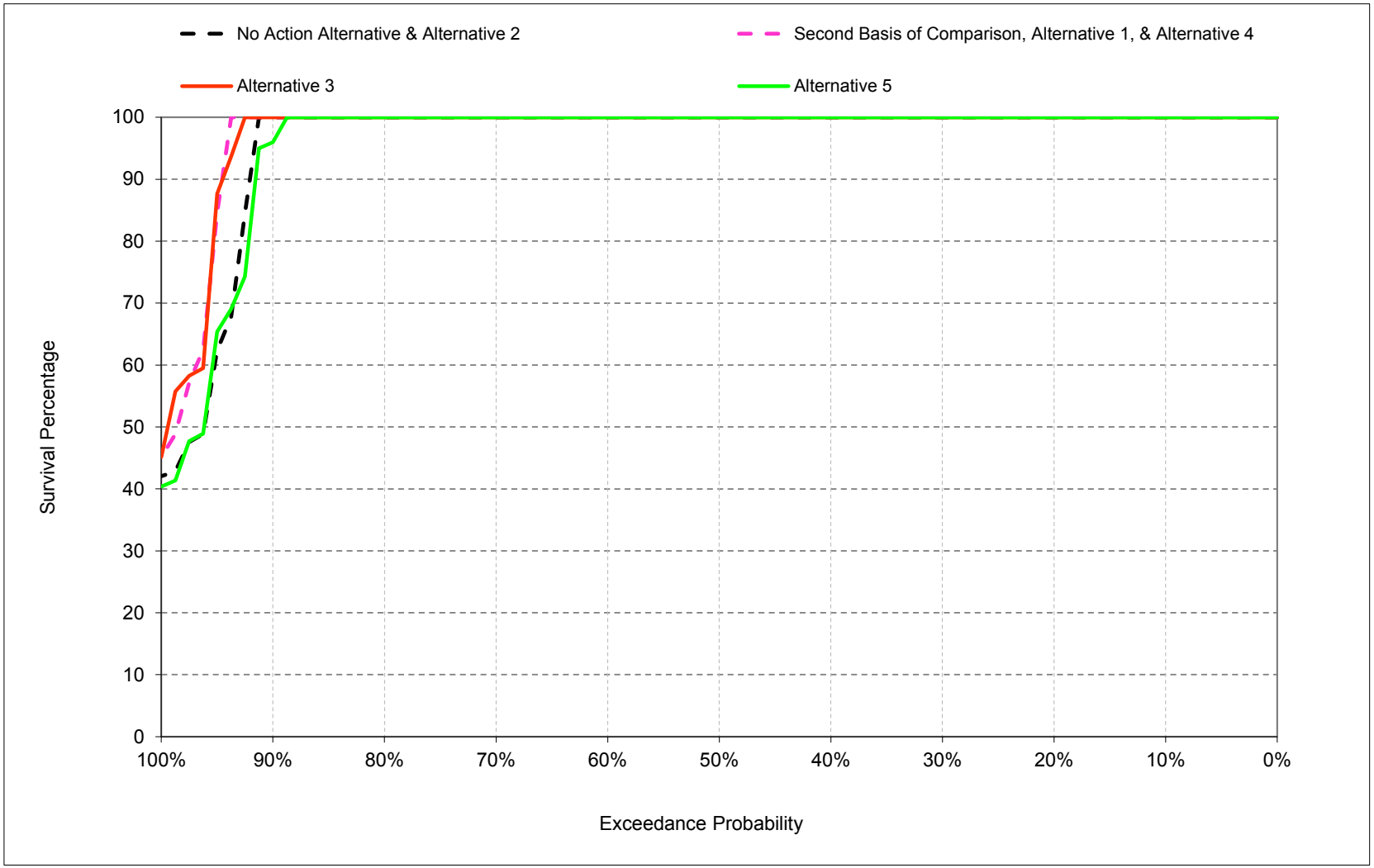
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

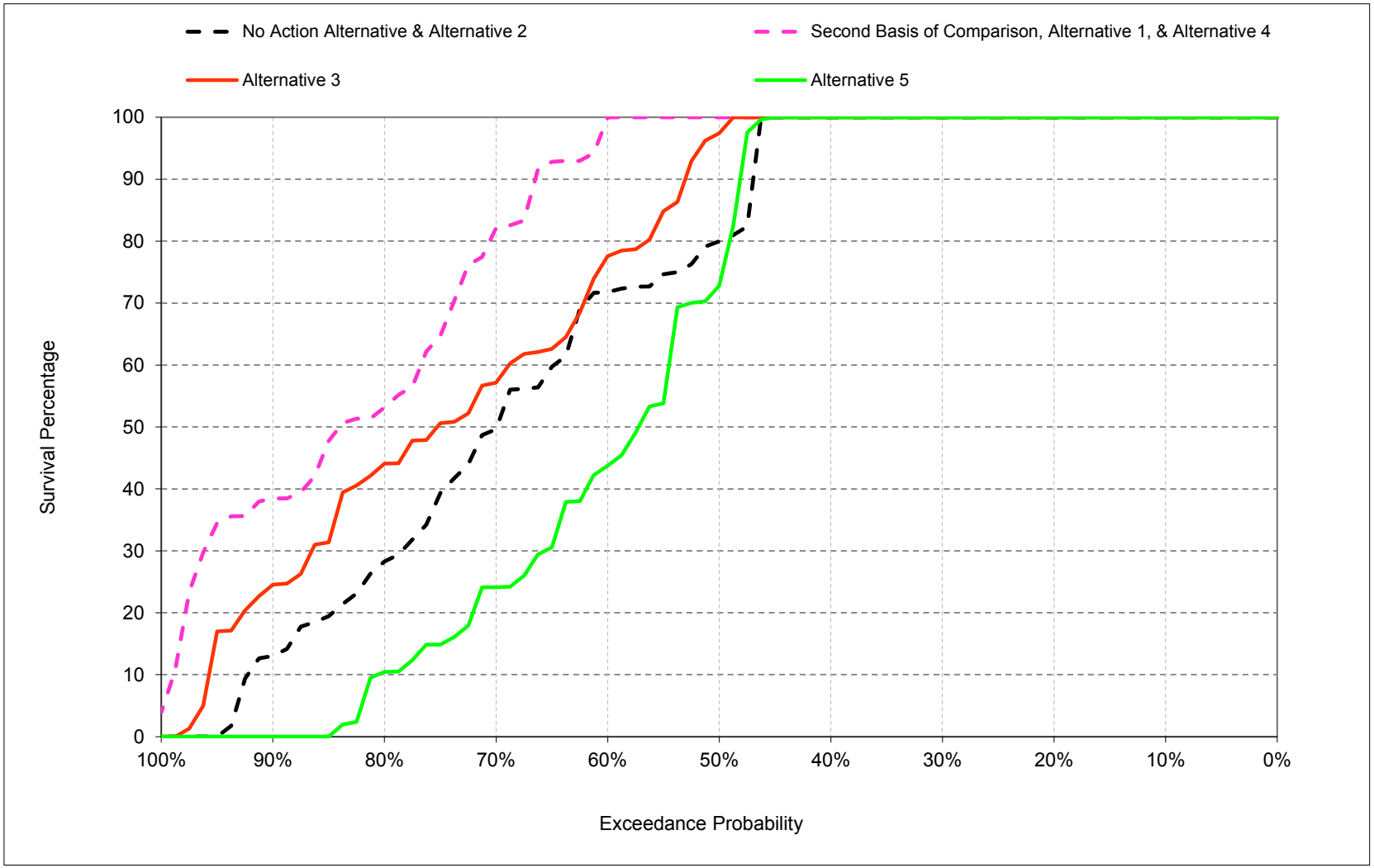
B.13. New Melones Large Mouth Bass Survival Percentage

Figure B-13-1. New Melones Large Mouth Bass Nest Survival Percentage, March



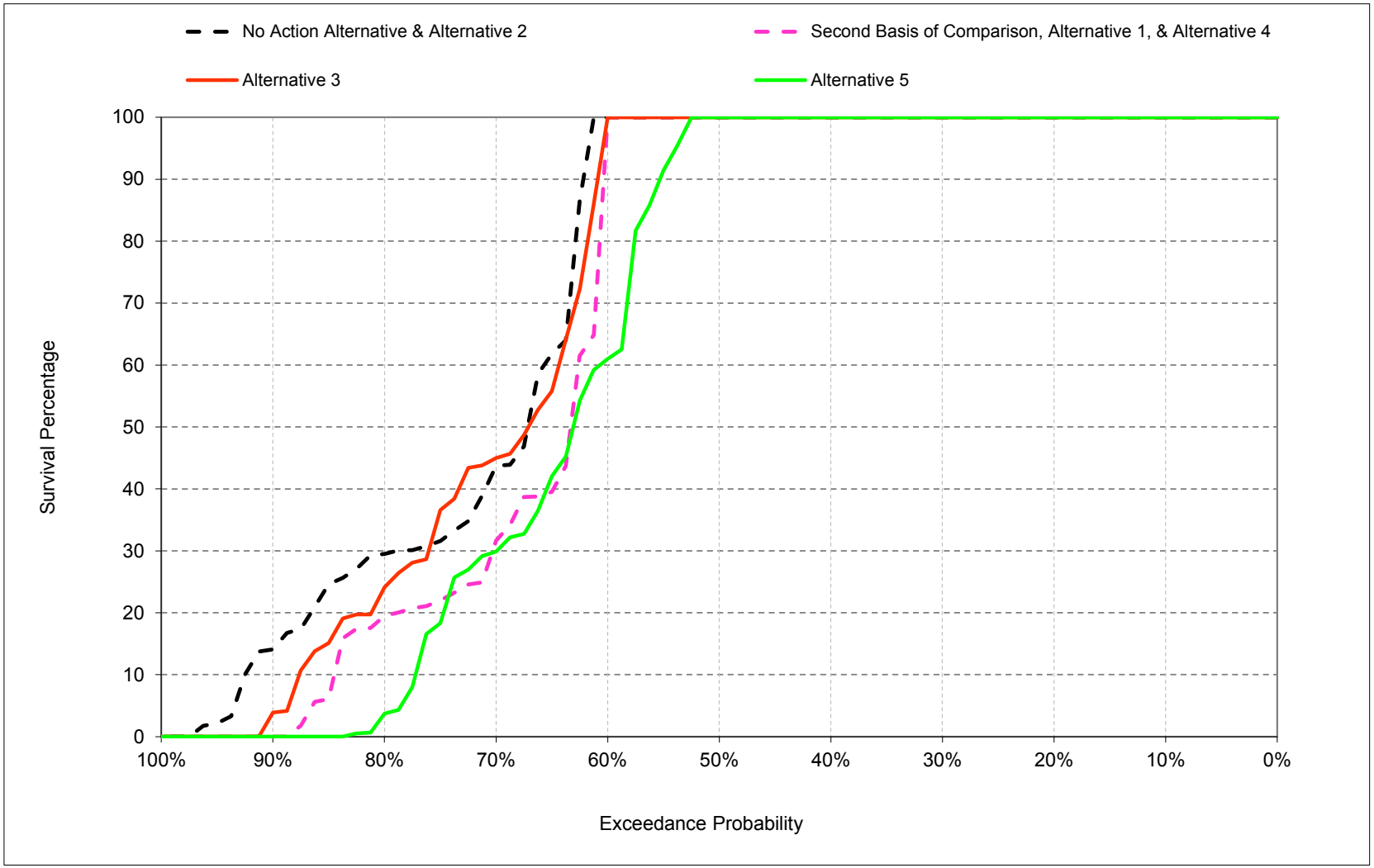
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-13-2. New Melones Large Mouth Bass Nest Survival Percentage, April



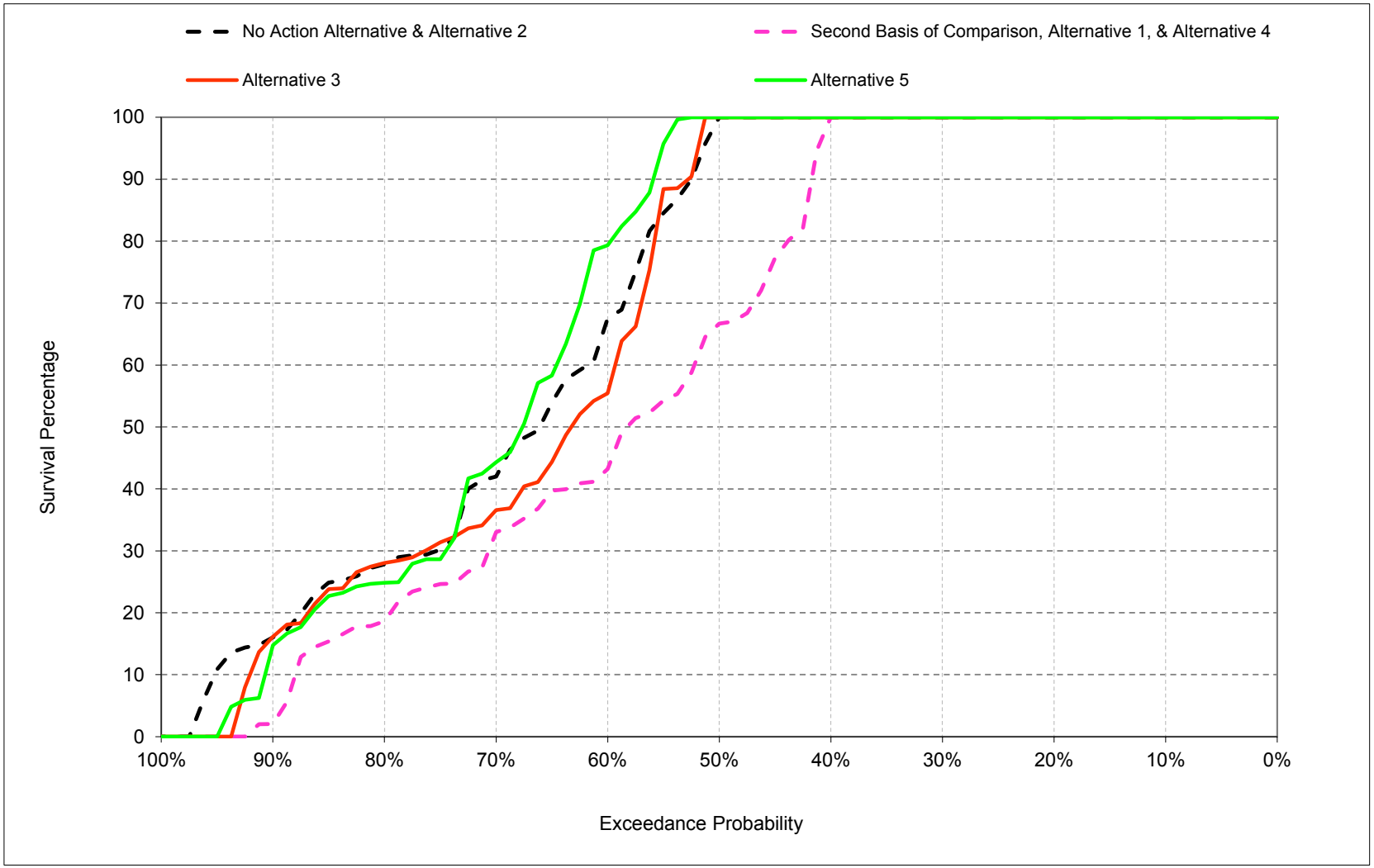
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-13-3. New Melones Large Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-13-4. New Melones Large Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-13-1. New Melones Large Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	80	100	98
60%	100	72	100	63
70%	100	49	40	42
80%	100	27	29	27
90%	100	13	14	15
Long Term				
Full Simulation Period[b]	95	68	72	69
Water Year Types[c]				
Wet (32%)	94	83	98	95
Above Normal (16%)	100	88	100	72
Below Normal (13%)	95	58	65	61
Dry (24%)	98	66	51	54
Critical (15%)	87	29	25	43

Alternative 1

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	98
50%	100	100	100	66
60%	100	97	79	42
70%	100	79	27	29
80%	100	52	18	18
90%	100	38	0	2
Long Term				
Full Simulation Period[b]	97	82	67	60
Water Year Types[c]				
Wet (32%)	98	93	94	76
Above Normal (16%)	100	95	100	68
Below Normal (13%)	100	77	62	50
Dry (24%)	98	84	43	51
Critical (15%)	86	44	17	43

Alternative 1 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	-2
50%	0	20	0	-32
60%	0	25	-21	-21
70%	0	30	-13	-13
80%	0	25	-11	-9
90%	0	25	-14	-13
Long Term				
Full Simulation Period[b]	2	14	-5	-9
Water Year Types[c]				
Wet (32%)	4	10	-4	-19
Above Normal (16%)	0	7	0	-5
Below Normal (13%)	5	19	-4	-10
Dry (24%)	0	18	-7	-4
Critical (15%)	-1	15	-8	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-13-2. New Melones Large Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	80	100	98
60%	100	72	100	63
70%	100	49	40	42
80%	100	27	29	27
90%	100	13	14	15
Long Term				
Full Simulation Period[b]	95	68	72	69
Water Year Types[c]				
Wet (32%)	94	83	98	95
Above Normal (16%)	100	88	100	72
Below Normal (13%)	95	58	65	61
Dry (24%)	98	66	51	54
Critical (15%)	87	29	25	43

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	97	100	100
60%	100	75	92	55
70%	100	57	44	35
80%	100	43	21	28
90%	100	23	0	14
Long Term				
Full Simulation Period[b]	96	73	70	67
Water Year Types[c]				
Wet (32%)	98	92	91	77
Above Normal (16%)	100	94	100	90
Below Normal (13%)	100	62	73	64
Dry (24%)	98	68	46	59
Critical (15%)	83	30	30	40

Alternative 3 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	17	0	2
60%	0	4	-8	-9
70%	0	8	4	-7
80%	0	16	-9	0
90%	0	10	-13	-1
Long Term				
Full Simulation Period[b]	1	5	-2	-2
Water Year Types[c]				
Wet (32%)	4	9	-7	-18
Above Normal (16%)	0	6	0	17
Below Normal (13%)	5	4	7	3
Dry (24%)	0	2	-4	5
Critical (15%)	-4	1	5	-2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-13-3. New Melones Large Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	80	100	98
60%	100	72	100	63
70%	100	49	40	42
80%	100	27	29	27
90%	100	13	14	15
Long Term				
Full Simulation Period[b]	95	68	72	69
Water Year Types[c]				
Wet (32%)	94	83	98	95
Above Normal (16%)	100	88	100	72
Below Normal (13%)	95	58	65	61
Dry (24%)	98	66	51	54
Critical (15%)	87	29	25	43

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	72	100	100
60%	100	43	60	79
70%	100	24	29	43
80%	100	10	1	25
90%	95	0	0	7
Long Term				
Full Simulation Period[b]	95	60	64	70
Water Year Types[c]				
Wet (32%)	95	87	93	97
Above Normal (16%)	100	79	94	61
Below Normal (13%)	95	50	58	59
Dry (24%)	98	45	37	52
Critical (15%)	85	14	19	60

Alternative 5 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	-8	0	2
60%	0	-29	-40	15
70%	0	-25	-11	1
80%	0	-17	-28	-3
90%	-5	-13	-14	-8
Long Term				
Full Simulation Period[b]	0	-9	-8	1
Water Year Types[c]				
Wet (32%)	1	4	-5	2
Above Normal (16%)	0	-9	-6	-12
Below Normal (13%)	0	-8	-7	-2
Dry (24%)	0	-21	-13	-2
Critical (15%)	-1	-15	-6	17

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-13-4. New Melones Large Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	98
50%	100	100	100	66
60%	100	97	79	42
70%	100	79	27	29
80%	100	52	18	18
90%	100	38	0	2
Long Term				
Full Simulation Period[b]	97	82	67	60
Water Year Types[c]				
Wet (32%)	98	93	94	76
Above Normal (16%)	100	95	100	68
Below Normal (13%)	100	77	62	50
Dry (24%)	98	84	43	51
Critical (15%)	86	44	17	43

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	80	100	98
60%	100	72	100	63
70%	100	49	40	42
80%	100	27	29	27
90%	100	13	14	15
Long Term				
Full Simulation Period[b]	95	68	72	69
Water Year Types[c]				
Wet (32%)	94	83	98	95
Above Normal (16%)	100	88	100	72
Below Normal (13%)	95	58	65	61
Dry (24%)	98	66	51	54
Critical (15%)	87	29	25	43

No Action Alternative minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	2
50%	0	-20	0	32
60%	0	-25	21	21
70%	0	-30	13	13
80%	0	-25	11	9
90%	0	-25	14	13
Long Term				
Full Simulation Period[b]	-2	-14	5	9
Water Year Types[c]				
Wet (32%)	-4	-10	4	19
Above Normal (16%)	0	-7	0	5
Below Normal (13%)	-5	-19	4	10
Dry (24%)	0	-18	7	4
Critical (15%)	1	-15	8	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-13-5. New Melones Large Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	98
50%	100	100	100	66
60%	100	97	79	42
70%	100	79	27	29
80%	100	52	18	18
90%	100	38	0	2
Long Term				
Full Simulation Period[b]	97	82	67	60
Water Year Types[c]				
Wet (32%)	98	93	94	76
Above Normal (16%)	100	95	100	68
Below Normal (13%)	100	77	62	50
Dry (24%)	98	84	43	51
Critical (15%)	86	44	17	43

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	97	100	100
60%	100	75	92	55
70%	100	57	44	35
80%	100	43	21	28
90%	100	23	0	14
Long Term				
Full Simulation Period[b]	96	73	70	67
Water Year Types[c]				
Wet (32%)	98	92	91	77
Above Normal (16%)	100	94	100	90
Below Normal (13%)	100	62	73	64
Dry (24%)	98	68	46	59
Critical (15%)	83	30	30	40

Alternative 3 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	2
50%	0	-3	0	34
60%	0	-21	13	13
70%	0	-22	17	6
80%	0	-9	3	10
90%	0	-15	0	12
Long Term				
Full Simulation Period[b]	0	-8	3	7
Water Year Types[c]				
Wet (32%)	0	-1	-3	1
Above Normal (16%)	0	-1	0	22
Below Normal (13%)	0	-15	11	13
Dry (24%)	0	-16	3	8
Critical (15%)	-3	-13	13	-2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-13-6. New Melones Large Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	98
50%	100	100	100	66
60%	100	97	79	42
70%	100	79	27	29
80%	100	52	18	18
90%	100	38	0	2
Long Term				
Full Simulation Period[b]	97	82	67	60
Water Year Types[c]				
Wet (32%)	98	93	94	76
Above Normal (16%)	100	95	100	68
Below Normal (13%)	100	77	62	50
Dry (24%)	98	84	43	51
Critical (15%)	86	44	17	43

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	72	100	100
60%	100	43	60	79
70%	100	24	29	43
80%	100	10	1	25
90%	95	0	0	7
Long Term				
Full Simulation Period[b]	95	60	64	70
Water Year Types[c]				
Wet (32%)	95	87	93	97
Above Normal (16%)	100	79	94	61
Below Normal (13%)	95	50	58	59
Dry (24%)	98	45	37	52
Critical (15%)	85	14	19	60

Alternative 5 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	2
50%	0	-28	0	34
60%	0	-54	-19	37
70%	0	-55	2	14
80%	0	-42	-17	7
90%	-5	-38	0	5
Long Term				
Full Simulation Period[b]	-2	-22	-3	10
Water Year Types[c]				
Wet (32%)	-3	-6	-1	21
Above Normal (16%)	0	-16	-6	-7
Below Normal (13%)	-5	-27	-4	9
Dry (24%)	0	-39	-6	2
Critical (15%)	-1	-30	2	17

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

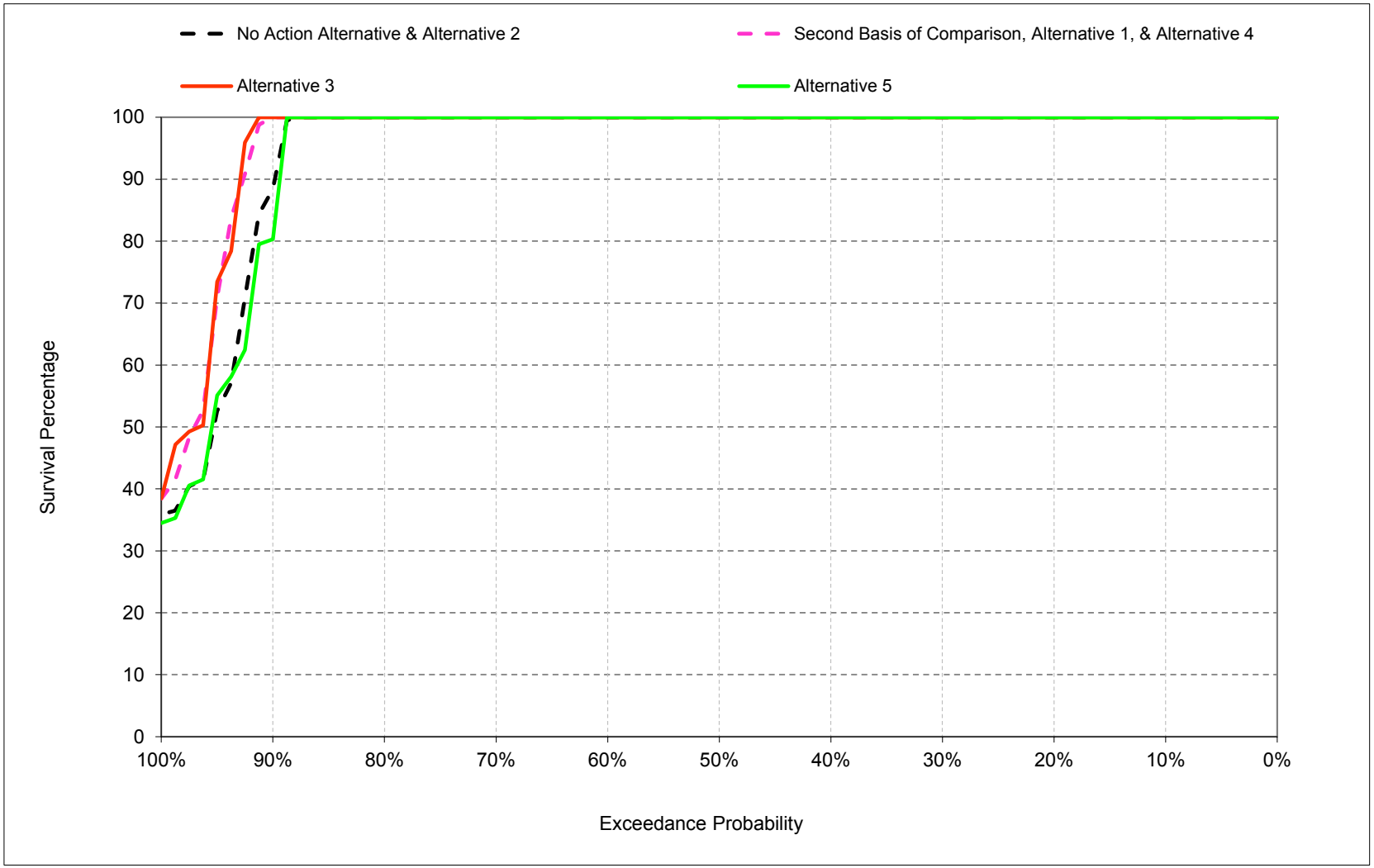
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

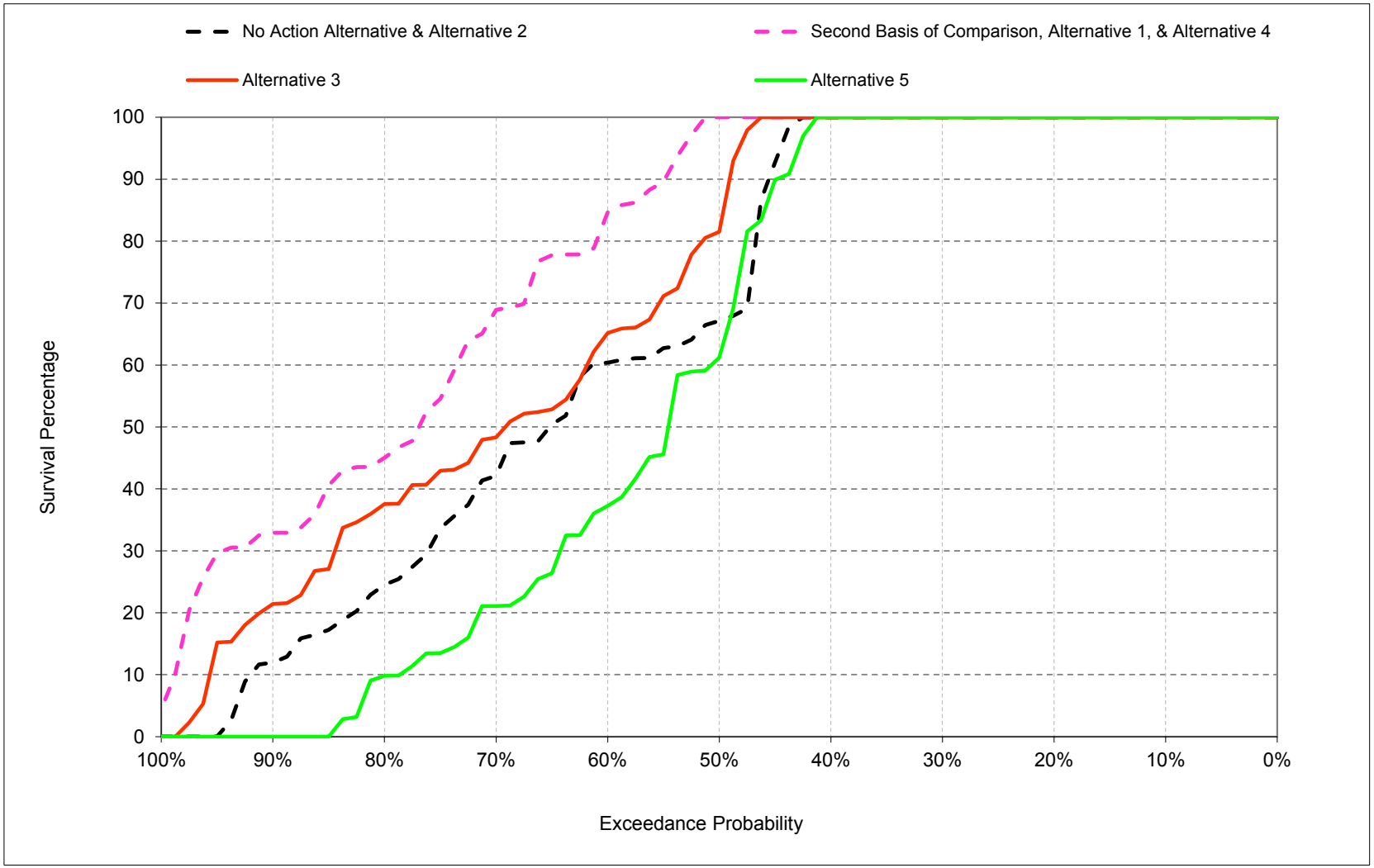
B.14. New Melones Small Mouth Bass Survival Percentage

Figure B-14-1. New Melones Small Mouth Bass Nest Survival Percentage, March



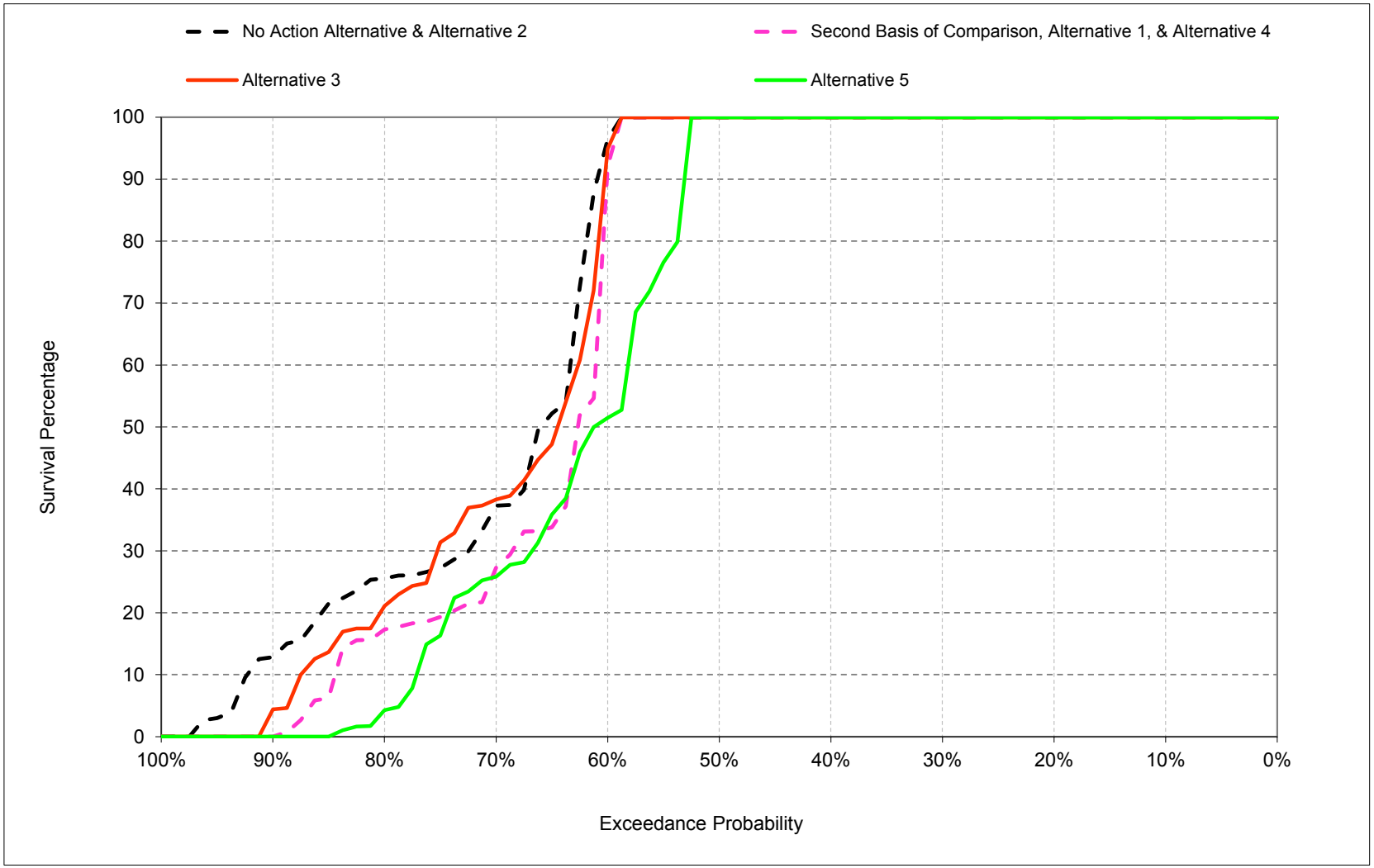
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-14-2. New Melones Small Mouth Bass Nest Survival Percentage, April



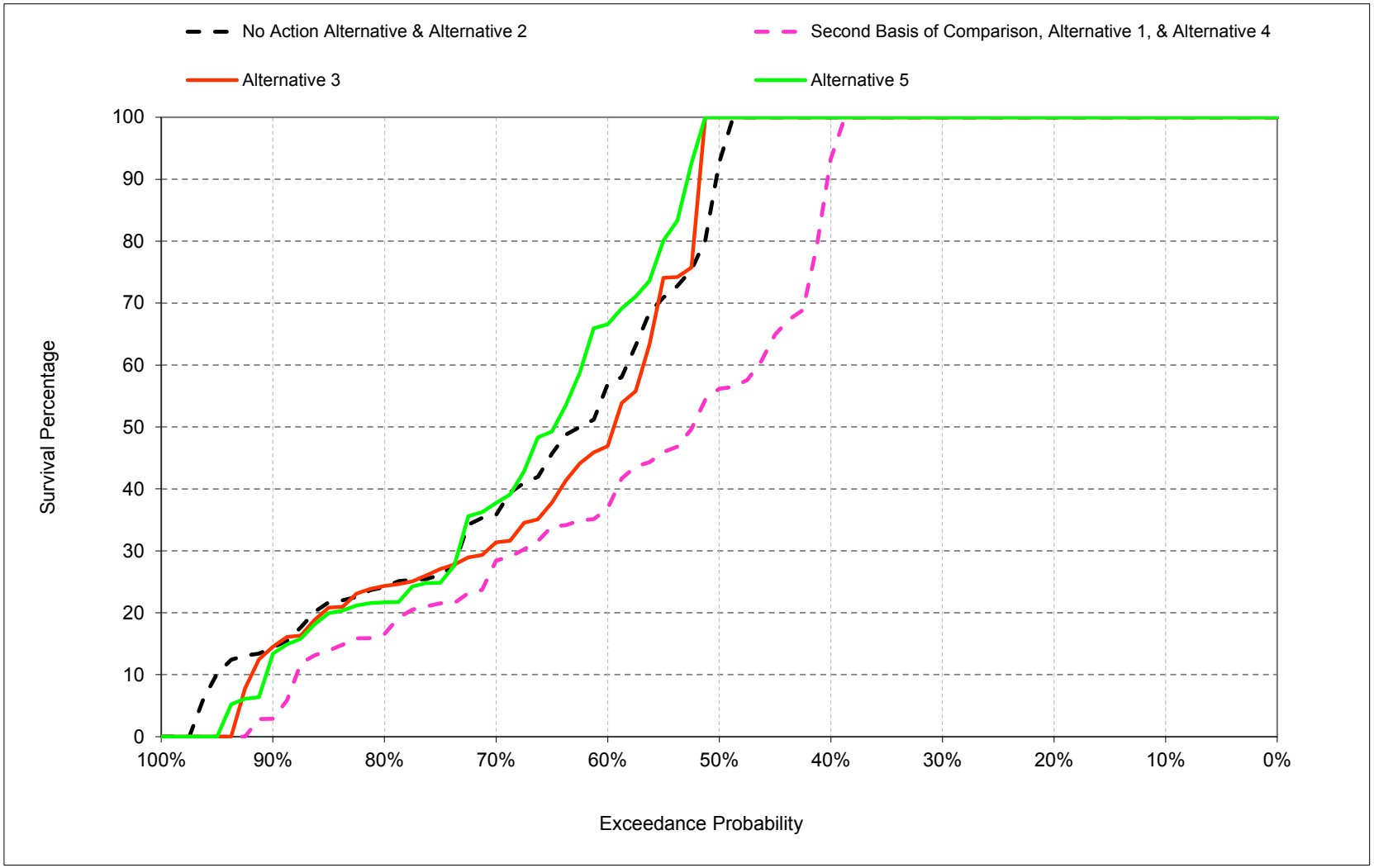
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-14-3. New Melones Small Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-14-4. New Melones Small Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-14-1. New Melones Small Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	67	100	86
60%	100	60	91	53
70%	100	42	34	35
80%	100	23	25	24
90%	85	12	13	14
Long Term				
Full Simulation Period[b]	94	65	70	66
Water Year Types[c]				
Wet (32%)	93	81	97	93
Above Normal (16%)	100	86	99	68
Below Normal (13%)	94	55	63	59
Dry (24%)	98	59	48	50
Critical (15%)	82	26	23	40

Alternative 1

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	88
50%	100	100	100	55
60%	100	81	70	36
70%	100	66	23	25
80%	100	44	16	16
90%	99	33	0	3
Long Term				
Full Simulation Period[b]	96	77	66	57
Water Year Types[c]				
Wet (32%)	98	90	94	73
Above Normal (16%)	100	94	99	64
Below Normal (13%)	100	72	59	49
Dry (24%)	97	77	42	47
Critical (15%)	82	39	16	40

Alternative 1 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	-12
50%	0	33	0	-31
60%	0	21	-22	-18
70%	0	25	-11	-10
80%	0	21	-9	-8
90%	14	21	-13	-11
Long Term				
Full Simulation Period[b]	2	13	-4	-9
Water Year Types[c]				
Wet (32%)	4	9	-4	-20
Above Normal (16%)	0	8	0	-4
Below Normal (13%)	6	17	-3	-10
Dry (24%)	-1	18	-6	-3
Critical (15%)	0	13	-7	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-14-2. New Melones Small Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	67	100	86
60%	100	60	91	53
70%	100	42	34	35
80%	100	23	25	24
90%	85	12	13	14
Long Term				
Full Simulation Period[b]	94	65	70	66
Water Year Types[c]				
Wet (32%)	93	81	97	93
Above Normal (16%)	100	86	99	68
Below Normal (13%)	94	55	63	59
Dry (24%)	98	59	48	50
Critical (15%)	82	26	23	40

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	81	100	100
60%	100	63	81	46
70%	100	48	38	30
80%	100	36	18	24
90%	100	20	0	13
Long Term				
Full Simulation Period[b]	96	70	69	65
Water Year Types[c]				
Wet (32%)	98	89	90	77
Above Normal (16%)	100	93	100	88
Below Normal (13%)	100	57	69	61
Dry (24%)	97	62	44	54
Critical (15%)	79	27	27	37

Alternative 3 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	14	0	14
60%	0	3	-10	-7
70%	0	6	3	-6
80%	0	13	-7	0
90%	15	8	-12	-1
Long Term				
Full Simulation Period[b]	2	5	-1	-1
Water Year Types[c]				
Wet (32%)	4	8	-7	-16
Above Normal (16%)	0	7	1	20
Below Normal (13%)	6	2	7	2
Dry (24%)	0	3	-4	4
Critical (15%)	-3	1	4	-3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-14-3. New Melones Small Mouth Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	67	100	86
60%	100	60	91	53
70%	100	42	34	35
80%	100	23	25	24
90%	85	12	13	14
Long Term				
Full Simulation Period[b]	94	65	70	66
Water Year Types[c]				
Wet (32%)	93	81	97	93
Above Normal (16%)	100	86	99	68
Below Normal (13%)	94	55	63	59
Dry (24%)	98	59	48	50
Critical (15%)	82	26	23	40

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	60	100	100
60%	100	37	51	66
70%	100	21	25	37
80%	100	9	2	22
90%	80	0	0	7
Long Term				
Full Simulation Period[b]	94	57	62	67
Water Year Types[c]				
Wet (32%)	95	84	90	94
Above Normal (16%)	100	76	93	58
Below Normal (13%)	94	47	56	57
Dry (24%)	97	43	36	49
Critical (15%)	81	13	19	58

Alternative 5 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	-7	0	14
60%	0	-24	-41	13
70%	0	-20	-9	1
80%	0	-14	-23	-2
90%	-5	-12	-13	-6
Long Term				
Full Simulation Period[b]	0	-7	-8	1
Water Year Types[c]				
Wet (32%)	1	3	-7	1
Above Normal (16%)	0	-10	-7	-10
Below Normal (13%)	0	-8	-6	-2
Dry (24%)	-1	-16	-12	-1
Critical (15%)	-1	-13	-4	18

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-14-4. New Melones Small Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	88
50%	100	100	100	55
60%	100	81	70	36
70%	100	66	23	25
80%	100	44	16	16
90%	99	33	0	3
Long Term				
Full Simulation Period[b]	96	77	66	57
Water Year Types[c]				
Wet (32%)	98	90	94	73
Above Normal (16%)	100	94	99	64
Below Normal (13%)	100	72	59	49
Dry (24%)	97	77	42	47
Critical (15%)	82	39	16	40

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	67	100	86
60%	100	60	91	53
70%	100	42	34	35
80%	100	23	25	24
90%	85	12	13	14
Long Term				
Full Simulation Period[b]	94	65	70	66
Water Year Types[c]				
Wet (32%)	93	81	97	93
Above Normal (16%)	100	86	99	68
Below Normal (13%)	94	55	63	59
Dry (24%)	98	59	48	50
Critical (15%)	82	26	23	40

No Action Alternative minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	12
50%	0	-33	0	31
60%	0	-21	22	18
70%	0	-25	11	10
80%	0	-21	9	8
90%	-14	-21	13	11
Long Term				
Full Simulation Period[b]	-2	-13	4	9
Water Year Types[c]				
Wet (32%)	-4	-9	4	20
Above Normal (16%)	0	-8	0	4
Below Normal (13%)	-6	-17	3	10
Dry (24%)	1	-18	6	3
Critical (15%)	0	-13	7	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-14-5. New Melones Small Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	88
50%	100	100	100	55
60%	100	81	70	36
70%	100	66	23	25
80%	100	44	16	16
90%	99	33	0	3
Long Term				
Full Simulation Period[b]	96	77	66	57
Water Year Types[c]				
Wet (32%)	98	90	94	73
Above Normal (16%)	100	94	99	64
Below Normal (13%)	100	72	59	49
Dry (24%)	97	77	42	47
Critical (15%)	82	39	16	40

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	81	100	100
60%	100	63	81	46
70%	100	48	38	30
80%	100	36	18	24
90%	100	20	0	13
Long Term				
Full Simulation Period[b]	96	70	69	65
Water Year Types[c]				
Wet (32%)	98	89	90	77
Above Normal (16%)	100	93	100	88
Below Normal (13%)	100	57	69	61
Dry (24%)	97	62	44	54
Critical (15%)	79	27	27	37

Alternative 3 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	12
50%	0	-19	0	45
60%	0	-18	12	10
70%	0	-18	14	5
80%	0	-8	2	8
90%	1	-12	0	10
Long Term				
Full Simulation Period[b]	0	-8	3	8
Water Year Types[c]				
Wet (32%)	0	-1	-3	4
Above Normal (16%)	0	-1	1	24
Below Normal (13%)	0	-16	10	13
Dry (24%)	0	-15	2	7
Critical (15%)	-3	-12	11	-3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-14-6. New Melones Small Mouth Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	88
50%	100	100	100	55
60%	100	81	70	36
70%	100	66	23	25
80%	100	44	16	16
90%	99	33	0	3
Long Term				
Full Simulation Period[b]	96	77	66	57
Water Year Types[c]				
Wet (32%)	98	90	94	73
Above Normal (16%)	100	94	99	64
Below Normal (13%)	100	72	59	49
Dry (24%)	97	77	42	47
Critical (15%)	82	39	16	40

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	60	100	100
60%	100	37	51	66
70%	100	21	25	37
80%	100	9	2	22
90%	80	0	0	7
Long Term				
Full Simulation Period[b]	94	57	62	67
Water Year Types[c]				
Wet (32%)	95	84	90	94
Above Normal (16%)	100	76	93	58
Below Normal (13%)	94	47	56	57
Dry (24%)	97	43	36	49
Critical (15%)	81	13	19	58

Alternative 5 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	12
50%	0	-40	0	45
60%	0	-45	-19	30
70%	0	-45	2	12
80%	0	-35	-14	6
90%	-19	-33	0	4
Long Term				
Full Simulation Period[b]	-2	-20	-4	10
Water Year Types[c]				
Wet (32%)	-3	-6	-3	21
Above Normal (16%)	0	-18	-7	-6
Below Normal (13%)	-6	-26	-3	9
Dry (24%)	0	-34	-6	2
Critical (15%)	-1	-26	3	18

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

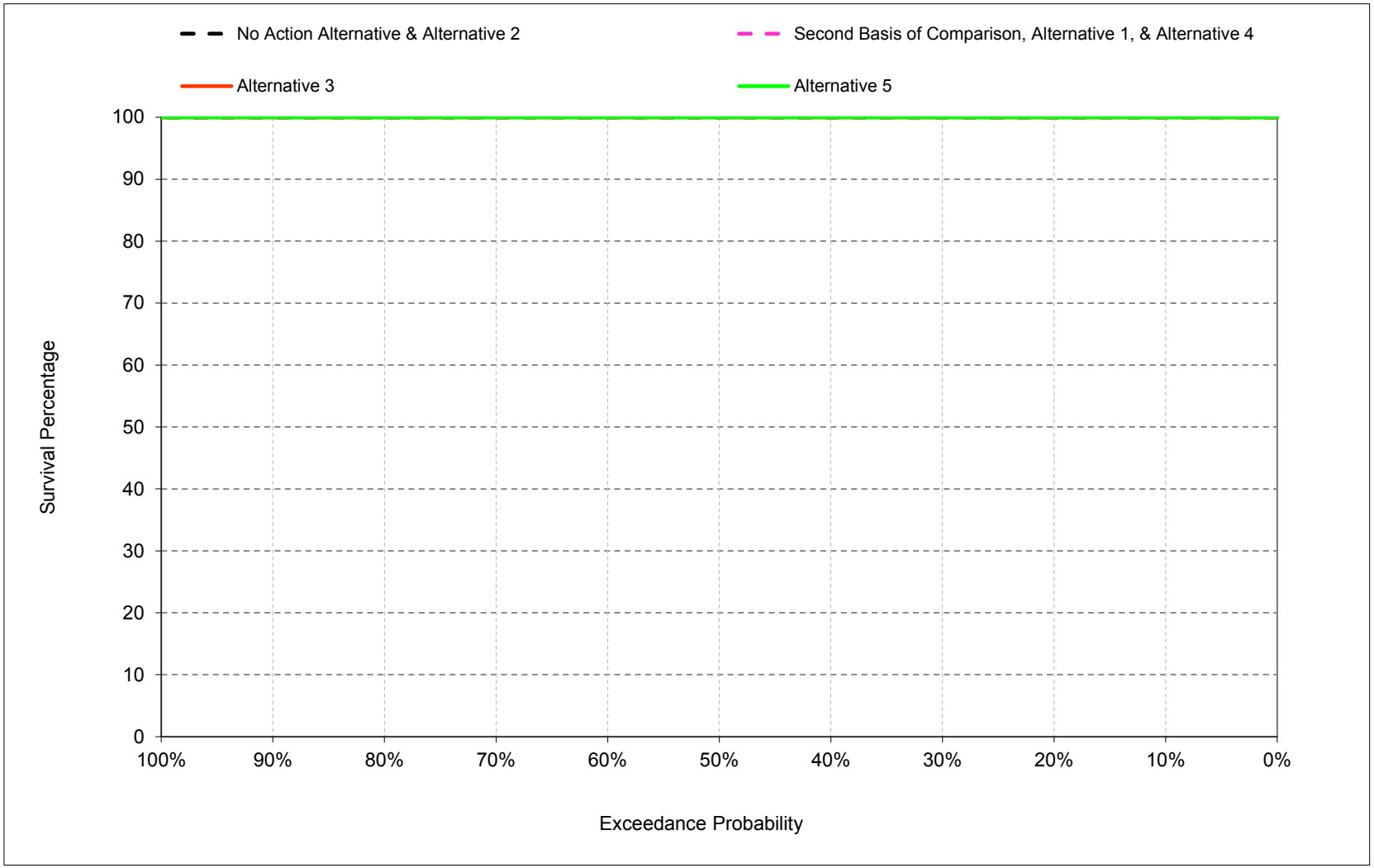
b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

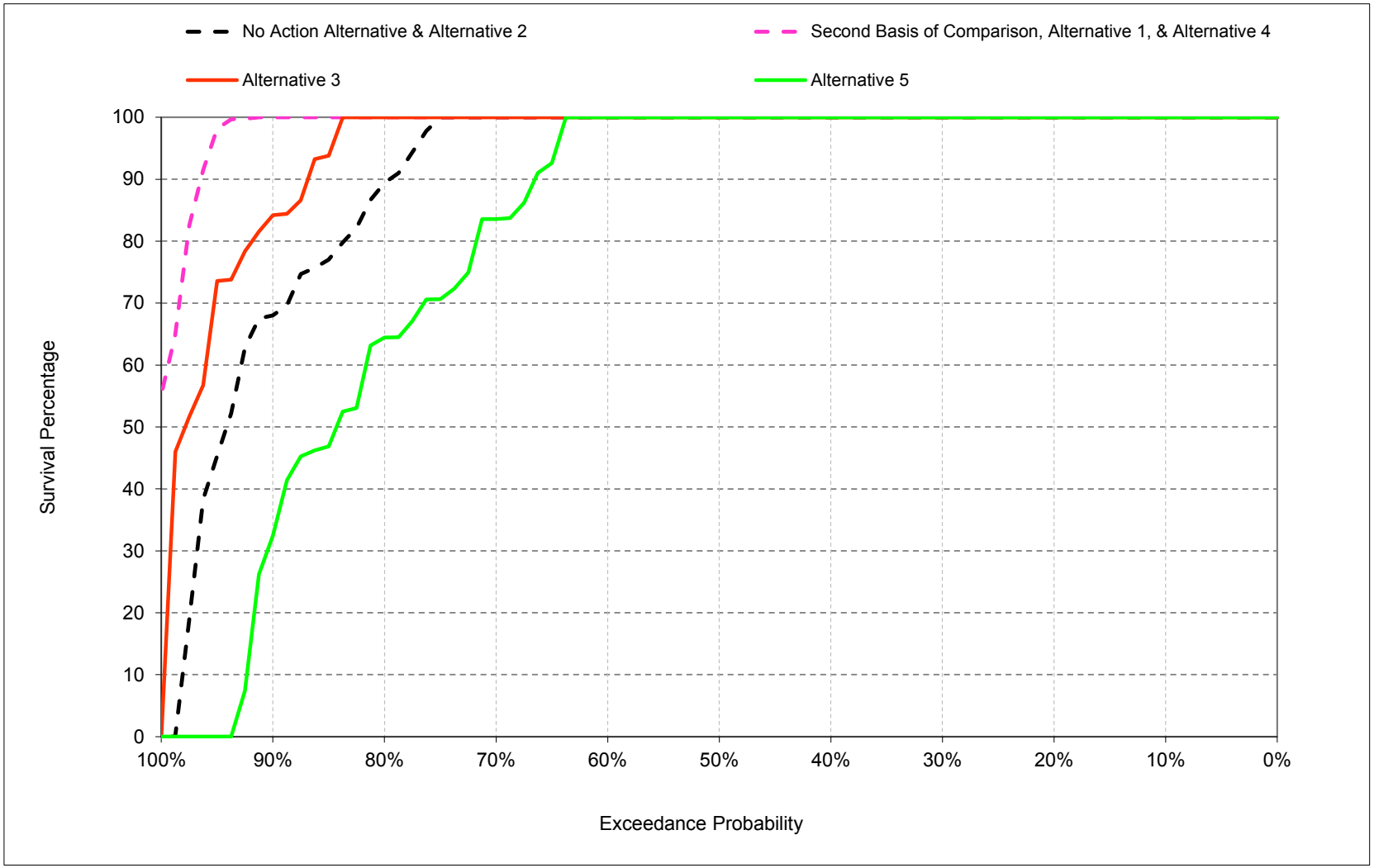
B.15. New Melones Spotted Bass Survival Percentage

Figure B-15-1. New Melones Spotted Bass Nest Survival Percentage, March



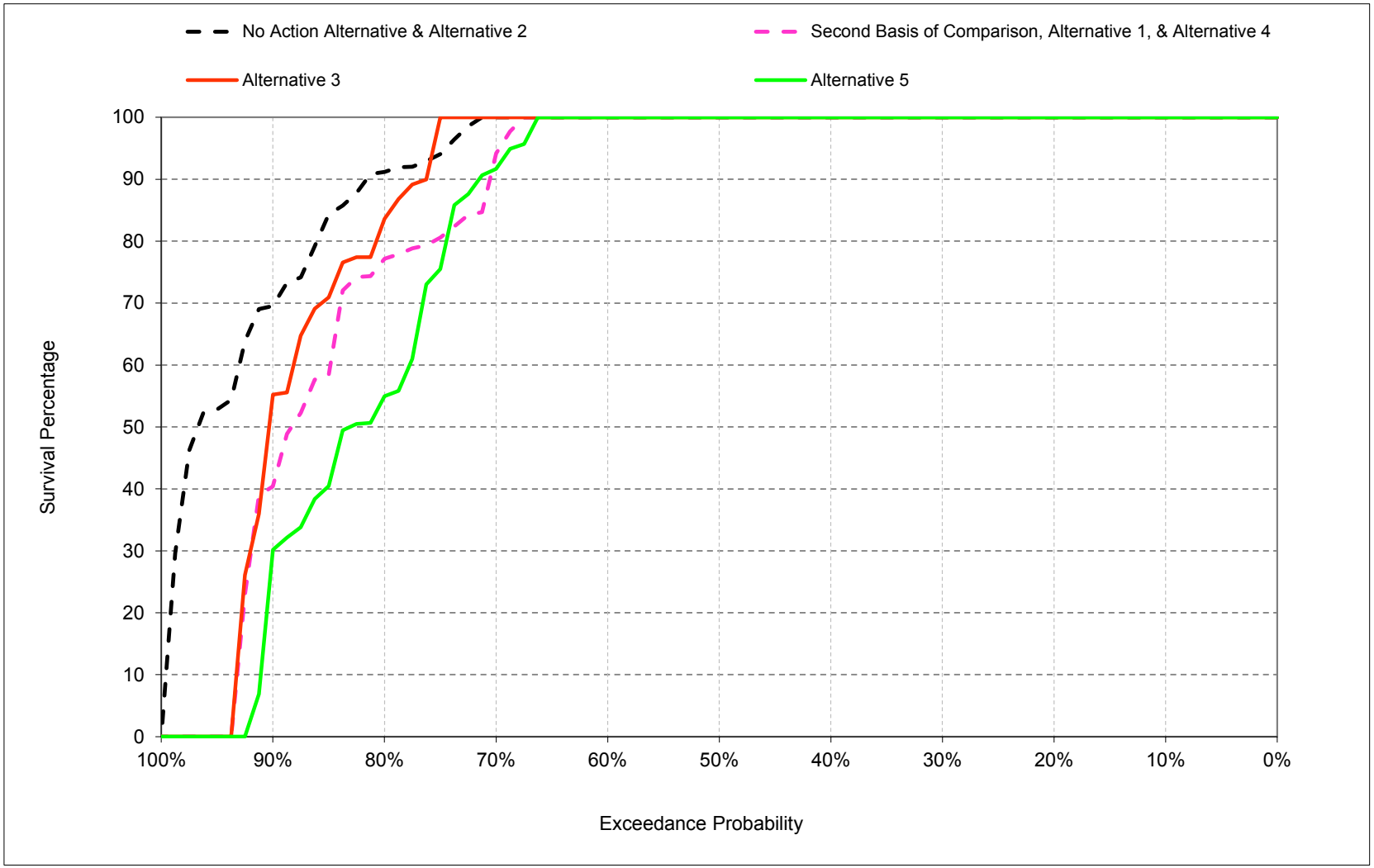
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-15-2. New Melones Spotted Bass Nest Survival Percentage, April



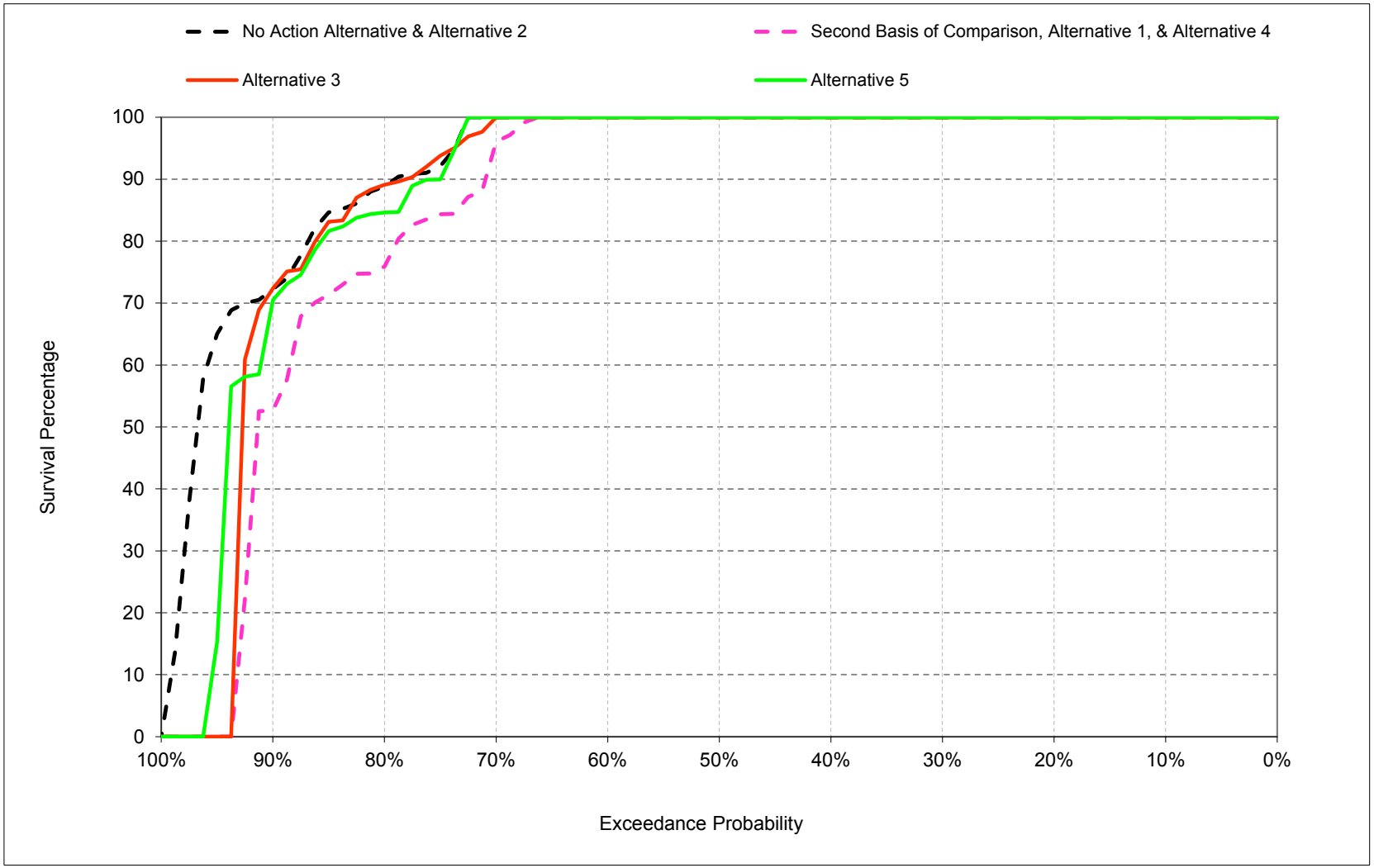
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-15-3. New Melones Spotted Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-15-4. New Melones Spotted Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-15-1. New Melones Spotted Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	87	91	88
90%	100	68	69	71
Long Term				
Full Simulation Period[b]	99	90	91	91
Water Year Types[c]				
Wet (32%)	96	88	100	96
Above Normal (16%)	100	98	100	99
Below Normal (13%)	100	90	90	94
Dry (24%)	100	97	92	89
Critical (15%)	100	73	62	72

Alternative 1

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	88	90
80%	100	100	75	75
90%	100	100	39	53
Long Term				
Full Simulation Period[b]	100	98	84	85
Water Year Types[c]				
Wet (32%)	100	100	96	92
Above Normal (16%)	100	100	100	96
Below Normal (13%)	100	100	88	76
Dry (24%)	100	100	79	78
Critical (15%)	100	87	45	78

Alternative 1 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	-12	-10
80%	0	13	-16	-13
90%	0	32	-30	-18
Long Term				
Full Simulation Period[b]	1	8	-7	-6
Water Year Types[c]				
Wet (32%)	4	12	-4	-4
Above Normal (16%)	0	2	0	-3
Below Normal (13%)	0	10	-2	-18
Dry (24%)	0	3	-13	-12
Critical (15%)	0	15	-17	6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-15-2. New Melones Spotted Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	87	91	88
90%	100	68	69	71
Long Term				
Full Simulation Period[b]	99	90	91	91
Water Year Types[c]				
Wet (32%)	96	88	100	96
Above Normal (16%)	100	98	100	99
Below Normal (13%)	100	90	90	94
Dry (24%)	100	97	92	89
Critical (15%)	100	73	62	72

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	98
80%	100	100	79	88
90%	100	82	38	69
Long Term				
Full Simulation Period[b]	99	94	86	88
Water Year Types[c]				
Wet (32%)	100	100	92	77
Above Normal (16%)	100	100	100	99
Below Normal (13%)	100	90	95	97
Dry (24%)	100	93	73	93
Critical (15%)	92	79	71	83

Alternative 3 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	-2
80%	0	13	-12	0
90%	0	14	-31	-1
Long Term				
Full Simulation Period[b]	0	4	-5	-3
Water Year Types[c]				
Wet (32%)	4	12	-8	-19
Above Normal (16%)	0	2	0	0
Below Normal (13%)	0	0	4	3
Dry (24%)	0	-4	-18	4
Critical (15%)	-8	6	9	11

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-15-3. New Melones Spotted Bass Nest Survival Percentage, Monthly Percentage

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	87	91	88
90%	100	68	69	71
Long Term				
Full Simulation Period[b]	99	90	91	91
Water Year Types[c]				
Wet (32%)	96	88	100	96
Above Normal (16%)	100	98	100	99
Below Normal (13%)	100	90	90	94
Dry (24%)	100	97	92	89
Critical (15%)	100	73	62	72

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	84	91	100
80%	100	63	52	84
90%	100	27	9	60
Long Term				
Full Simulation Period[b]	100	81	80	88
Water Year Types[c]				
Wet (32%)	99	99	100	100
Above Normal (16%)	100	90	100	76
Below Normal (13%)	100	78	74	92
Dry (24%)	100	78	71	85
Critical (15%)	100	38	38	80

Alternative 5 minus No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	-16	-9	0
80%	0	-24	-39	-4
90%	0	-41	-60	-11
Long Term				
Full Simulation Period[b]	1	-9	-11	-3
Water Year Types[c]				
Wet (32%)	3	11	0	4
Above Normal (16%)	0	-9	0	-23
Below Normal (13%)	0	-12	-17	-3
Dry (24%)	0	-19	-20	-5
Critical (15%)	0	-35	-24	8

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-15-4. New Melones Spotted Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	88	90
80%	100	100	75	75
90%	100	100	39	53
Long Term				
Full Simulation Period[b]	100	98	84	85
Water Year Types[c]				
Wet (32%)	100	100	96	92
Above Normal (16%)	100	100	100	96
Below Normal (13%)	100	100	88	76
Dry (24%)	100	100	79	78
Critical (15%)	100	87	45	78

No Action Alternative

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	87	91	88
90%	100	68	69	71
Long Term				
Full Simulation Period[b]	99	90	91	91
Water Year Types[c]				
Wet (32%)	96	88	100	96
Above Normal (16%)	100	98	100	99
Below Normal (13%)	100	90	90	94
Dry (24%)	100	97	92	89
Critical (15%)	100	73	62	72

No Action Alternative minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	12	10
80%	0	-13	16	13
90%	0	-32	30	18
Long Term				
Full Simulation Period[b]	-1	-8	7	6
Water Year Types[c]				
Wet (32%)	-4	-12	4	4
Above Normal (16%)	0	-2	0	3
Below Normal (13%)	0	-10	2	18
Dry (24%)	0	-3	13	12
Critical (15%)	0	-15	17	-6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-15-5. New Melones Spotted Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	88	90
80%	100	100	75	75
90%	100	100	39	53
Long Term				
Full Simulation Period[b]	100	98	84	85
Water Year Types[c]				
Wet (32%)	100	100	96	92
Above Normal (16%)	100	100	100	96
Below Normal (13%)	100	100	88	76
Dry (24%)	100	100	79	78
Critical (15%)	100	87	45	78

Alternative 3

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	98
80%	100	100	79	88
90%	100	82	38	69
Long Term				
Full Simulation Period[b]	99	94	86	88
Water Year Types[c]				
Wet (32%)	100	100	92	77
Above Normal (16%)	100	100	100	99
Below Normal (13%)	100	90	95	97
Dry (24%)	100	93	73	93
Critical (15%)	92	79	71	83

Alternative 3 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	12	8
80%	0	0	4	13
90%	0	-18	-1	17
Long Term				
Full Simulation Period[b]	-1	-4	2	3
Water Year Types[c]				
Wet (32%)	0	0	-4	-15
Above Normal (16%)	0	0	0	3
Below Normal (13%)	0	-10	6	21
Dry (24%)	0	-7	-5	16
Critical (15%)	-8	-8	26	4

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Table B-15-6. New Melones Spotted Bass Nest Survival Percentage, Monthly Percentage

Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	88	90
80%	100	100	75	75
90%	100	100	39	53
Long Term				
Full Simulation Period[b]	100	98	84	85
Water Year Types[c]				
Wet (32%)	100	100	96	92
Above Normal (16%)	100	100	100	96
Below Normal (13%)	100	100	88	76
Dry (24%)	100	100	79	78
Critical (15%)	100	87	45	78

Alternative 5

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	84	91	100
80%	100	63	52	84
90%	100	27	9	60
Long Term				
Full Simulation Period[b]	100	81	80	88
Water Year Types[c]				
Wet (32%)	99	99	100	100
Above Normal (16%)	100	90	100	76
Below Normal (13%)	100	78	74	92
Dry (24%)	100	78	71	85
Critical (15%)	100	38	38	80

Alternative 5 minus Second Basis of Comparison

Statistic	Mar	Apr	May	Jun
Probability of Exceedance[a]				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	-16	3	10
80%	0	-37	-23	9
90%	0	-73	-30	7
Long Term				
Full Simulation Period[b]	0	-17	-3	3
Water Year Types[c]				
Wet (32%)	-1	-1	4	8
Above Normal (16%)	0	-10	0	-20
Below Normal (13%)	0	-22	-15	15
Dry (24%)	0	-22	-7	7
Critical (15%)	0	-50	-6	2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Appendix 9G

Smelt Analysis

This appendix provides information about the methods and the assumptions used for the Remanded Biological Opinions on the Coordinated Long-Term Operation of the Central Valley Project (CVP) and State Water Project (SWP) Environmental Impact Statement (EIS) analysis of Delta Smelt entrainment and Longfin Smelt abundance.

This appendix is organized into two main sections that are briefly described below:

- Section 9G.1: Smelt Modeling Methodology
  - This section presents the entrainment analysis for Delta Smelt adults, larvae and juveniles. The Delta Smelt entrainment analysis is based on regression equations that take into account the combined Old and Middle River (OMR) flow and X2[1] location. This section also describes longfin smelt abundance analysis, which is based on a regression equation that correlates an abundance index based on the X2 location.
- Section 9G.2: Smelt Modeling Results
  - This section presents the simulated Delta Smelt entrainment percentages and longfin smelt abundance indexes for each EIS alternative.

9G.1 Smelt Modeling Methodology and Assumptions

This section summarizes the modeling methodology used for simulating Delta Smelt entrainment, and longfin smelt abundance for the No Action Alternative, Second Basis of Comparison, and Alternatives 1 through 5. It describes the approach used in the quantitative evaluation of potential impacts on Delta Smelt entrainment.

9G.1.1 Delta Smelt Entrainment

Assumptions for adults, and for larvae and juveniles are discussed separately in the following sections.

9G.1.1.1 Methodology for Migrating and Spawning Adults (December-March)

The entrainment of migrating and spawning adult Delta Smelt is primarily affected by the combined OMR flow in December through March. Water exported at the Banks and Jones pumping plants typically flows through the Old and Middle River channels. A positive OMR flow indicates a northward flow in the natural direction, toward the San Francisco Bay, and contributing to the Delta

[1] The location of X2 is described in terms of the average distance of the two practical salinity units isohaline from the Golden Gate Bridge.

outflow. A negative OMR flow indicates a southward flow induced by pumping, and subtracts from the Delta outflow.

In order to simulate Delta Smelt entrainment as influenced by OMR flow, the U.S. Fish and Wildlife Service (2008) developed a regression model based on Kimmerer (2008). This regression model is subject to uncertainty and scientific dispute (Kimmerer 2011; Miller 2011), and is being revisited in the CSAMP process. The equation developed by the U.S. Fish and Wildlife Service (2008) uses the average December through March OMR flow (in units of cubic feet per second [cfs]) and yields the percentage of adult Delta Smelt that may become entrained in the pumps. The equation is:

*Adult entrainment loss [percentage] = 6.243 - 0.000957 * OMR Flow (average OMR from December through March)*

Kimmerer's (2008) original estimates of entrainment loss had large confidence limits, which Kimmerer (2008:24) noted could be reduced by additional sampling. Miller (2011) assessed the explicit and implicit assumptions of Kimmerer's estimation methods and found that of eight assumptions, there were three that may have biased the estimates of adult proportional entrainment upward and one that may have biased the estimates downward. Miller (2011) suggested methodological adjustments for three of the four assumptions that could have resulted in biased estimates of adult proportional entrainment. In response, a reanalysis by Kimmerer (2011) suggested the above equation should be reduced by 24 percent. In the event that a negative entrainment percentage was calculated, the result was changed to zero.

9G.1.1.2 Methodology for Larvae and Early Juveniles (March-June)

Larvae and early juvenile smelt (generally <60 mm) are most prevalent in the Delta in the spring months of March through June. The U.S. Fish and Wildlife Service (2008) developed a regression model based on Kimmerer (2008) to calculate the percentage entrainment of larval and early juvenile Delta Smelt in South Delta pumping facilities. This regression is dependent on two variables: March through June average OMR flow, and March through June average X2:

*Larvae and early juvenile entrainment loss [percentage] = [0.00933 * X2 (March through June) - 0.0000207 * OMR Flow (March through June) - 0.556] * 100*

Similar to described of the concerns associated with the original adult entrainment loss estimates, Miller (2011) suggested that of 10 assumptions made by Kimmerer (2008), eight would have resulted in upward bias and two would not have resulted in bias. However, Miller only provided a quantitative adjustment for only one of the assumptions resulting in bias. Subsequent review by Kimmerer (2011) rejected this adjustment such that the above equation for larval and early juvenile entrainment was used without adjustment. In the event that a negative entrainment percentage was calculated, the result was changed to zero. OMR and X2 values simulated in the CalSim II model for each alternative were used in estimating the entrainment loss.

9G.1.2 Delta Smelt Fall Abiotic Habitat Index

Feyrer et al. (2010) demonstrated that Delta Smelt abiotic habitat availability in the fall in the West Delta, Suisun Bay, and Suisun Marsh subregions, as well as smaller portions of the Cache Slough, South Delta, and North Delta subregions, is correlated with X2 location. Feyrer et al. (2010) used X2 as an indicator of the suitable salinity and water transparency for rearing older juvenile Delta Smelt. Feyrer et al. (2010) concluded that when X2 is located downstream (west) of the confluence of the Sacramento and San Joaquin rivers, at a distance of 70 to 80 km from the Golden Gate Bridge, there is a larger area of suitable habitat. The overlap of the low salinity zone (or X2) with the Suisun Bay/Marsh results in a two-fold increase in the habitat index (Feyrer et al 2010); however others (see Manly et al. 2015) have questioned the use of outflow and X2 location as an indicator of Delta Smelt habitat because other factors may be influencing survival.

In evaluating the fall abiotic habitat availability for Delta Smelt under the alternatives, average September through December X2 position in kilometers was used. X2 values simulated in the CalSim II model for each alternative were averaged over September through December, and compared for the expected changes.

9G.1.3 Longfin Smelt Abundance

Kimmerer et al. (2009) correlated log-transformed Longfin Smelt abundance based on the Fall Midwater Trawl (FMWT) data with the winter and spring location of X2. The correlation is based on the following regression equation:

*Longfin Smelt abundance index value = 10 ^ [-0.05 * (January through June X2 average position) + 7]*

The equation is based on the assumption that a lower X2 value indicates higher flows transporting longfin farther downstream, which would lead to greater longfin smelt survival. The index value indicates the relative abundance of Longfin Smelt and not the size of the population.

9G.2 Smelt Modeling Results

Modeling results are presented in tabular format for Delta Smelt entrainment, September through December X2, and Longfin Smelt abundance. The Delta Smelt analysis results show the percent entrainment for the long-term average and for each water year type for the No Action Alternative, Second Basis of Comparison, Alternative 3, and Alternative 5 in Tables B-1 and B-2. Each alternative is also compared to each of the bases of comparison (No Action Alternative and Second Basis of Comparison). Results are provided separately for adults and larvae/juveniles. Long-term average fall X2 (September through December) and average for each water year type, in KM, are presented in Table B-3. Differences between alternatives with a minus sign are closer to the Golden Gate Bridge. The Longfin Smelt abundance shown in Table B-4 provides the

abundance index value for long-term average and for each water year type for the different alternatives.

Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented separately. Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented separately.

The EIS impact analysis starts with use of the monthly CalSim II model to project CVP and SWP water deliveries. Because this regional model uses monthly time steps to simulate requirements that change weekly or change through observations, it was determined that changes in the model of 5 percent or less were related to the uncertainties in the model processing. Therefore, reductions of 5 percent or less in this comparative analysis are considered to be not substantially different, or "similar."

9G.3 References

Feyrer, F., K. Newman, M. Nobriga, and T. Sommer. 2010. Modeling the Effects of Future Outflow on the Abiotic Habitat of an Imperiled Estuarine Fish. *Estuaries and Coasts* 34:120–128.

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USFWS (U.S. Fish and Wildlife Service). 2008. Formal Endangered Species Act Consultation on the Proposed Coordinated Operations of the Central Valley Project (CVP) and State Water Project (SWP). Sacramento, CA.

Table B-1. Adult Delta Smelt Entrainment (Dec-Mar).

	Smelt Entrainment	Difference from No Action Alternative	Difference from Second Basis of Comparison
	Percent Entrainment	Percent Entrainment	Percent Entrainment
No Action Alternative			
Long-term Average	7.60	---	-1.41
Wet	6.94	---	-1.13
Above Normal	8.00	---	-1.77
Below Normal	8.28	---	-1.54
Dry	8.01	---	-1.65
Critical	7.30	---	-1.10
Second Basis of Comparison			
Long-term Average	9.01	1.41	
Wet	8.07	1.13	---
Above Normal	9.77	1.77	---
Below Normal	9.82	1.54	---
Dry	9.66	1.65	---
Critical	8.41	1.10	---
Alternative 3			
Long-term Average	7.85	0.25	-1.16
Wet	7.31	0.37	-0.76
Above Normal	8.41	0.41	-1.36
Below Normal	8.52	0.24	-1.30
Dry	8.09	0.08	-1.57
Critical	7.38	0.08	-1.02
Alternative 5			
Long-term Average	7.61	0.01	-1.40
Wet	6.94	0.00	-1.13
Above Normal	8.01	0.01	-1.76
Below Normal	8.30	0.02	-1.52
Dry	8.02	0.01	-1.64
Critical	7.31	0.01	-1.09

Notes: All results are based on the 82-year simulation period. The water year types are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Table B-2. Juvenile Delta Smelt Entrainment (Mar-Jun).

	Smelt Entrainment	Difference from No Action Alternative	Difference from Second Basis of Comparison
	Percent Entrainment	Percent Entrainment	Percent Entrainment
No Action Alternative			
Long-term Average	8.59	---	-6.91
Wet	1.34	---	-5.56
Above Normal	3.64	---	-9.31
Below Normal	11.98	---	-9.38
Dry	12.99	---	-7.30
Critical	19.25	---	-4.32
Second Basis of Comparison			
Long-term Average	15.50	6.91	
Wet	6.90	5.56	---
Above Normal	12.95	9.31	---
Below Normal	21.36	9.38	---
Dry	20.29	7.30	---
Critical	23.58	4.32	---
Alternative 3			
Long-term Average	12.69	4.09	-2.82
Wet	5.64	4.30	-1.26
Above Normal	10.07	6.43	-2.88
Below Normal	16.93	4.95	-4.43
Dry	16.52	3.54	-3.76
Critical	20.50	1.25	-3.08
Alternative 5			
Long-term Average	7.72	-0.87	-7.78
Wet	1.23	-0.11	-5.67
Above Normal	3.39	-0.25	-9.56
Below Normal	11.01	-0.97	-10.35
Dry	11.27	-1.71	-9.01
Critical	17.56	-1.69	-6.01

Notes: All results are based on the 82-year simulation period. The water year types are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Table B-3. X2 Position (Sep-Dec).

	X2 Position	Difference from No Action Alternative	Difference from Second Basis of Comparison
	km	km	km
No Action Alternative			
Long-term Average	84.0	---	-4.2
Wet	75.9	---	-9.8
Above Normal	81.2	---	-6.1
Below Normal	87.8	---	-0.6
Dry	89.1	---	-0.2
Critical	92.4	---	0.1
Second Basis of Comparison			
Long-term Average	88.1	4.2	
Wet	85.6	9.8	---
Above Normal	87.3	6.1	---
Below Normal	88.4	0.6	---
Dry	89.3	0.2	---
Critical	92.3	-0.1	---
Alternative 3			
Long-term Average	88.1	4.1	-0.1
Wet	85.5	9.7	-0.1
Above Normal	87.2	6.0	-0.1
Below Normal	88.1	0.3	-0.3
Dry	89.4	0.2	0.0
Critical	92.5	0.1	0.1
Alternative 5			
Long-term Average	83.9	0.0	-4.2
Wet	75.8	0.0	-9.8
Above Normal	81.2	0.0	-6.1
Below Normal	87.6	-0.2	-0.8
Dry	89.1	0.0	-0.2
Critical	92.3	-0.1	0.0

Notes: All results are based on the 82-year simulation period. The water year types are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Table B-4. Longfin Smelt Abundance Index.

	Longfin Smelt Abundance Index Value	Percent Difference from No Action Alternative	Percent Difference from Second Basis of Comparison
No Action Alternative			
Long-term Average	7951	---	9.6%
Wet	16635	---	5.1%
Above Normal	8989	---	15.8%
Below Normal	3166	---	21.6%
Dry	2702	---	26.2%
Critical	1147	---	21.0%
Second Basis of Comparison			
Long-term Average	7257	-8.7%	
Wet	15822	-4.9%	---
Above Normal	7762	-13.7%	---
Below Normal	2604	-17.8%	---
Dry	2140	-20.8%	---
Critical	947	-17.4%	---
Alternative 3			
Long-term Average	7345	-7.6%	1.2%
Wet	15638	-6.0%	-1.2%
Above Normal	7882	-12.3%	1.5%
Below Normal	2857	-9.8%	9.7%
Dry	2435	-9.9%	13.8%
Critical	1094	-4.6%	15.5%
Alternative 5			
Long-term Average	8015	0.8%	10.4%
Wet	16683	0.3%	5.4%
Above Normal	9037	0.5%	16.4%
Below Normal	3231	2.0%	24.1%
Dry	2800	3.6%	30.8%
Critical	1204	5.0%	27.1%

Notes: All results are based on the 82-year simulation period. The water year types are defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.