Surface Water Resources and WaterSupply Figures

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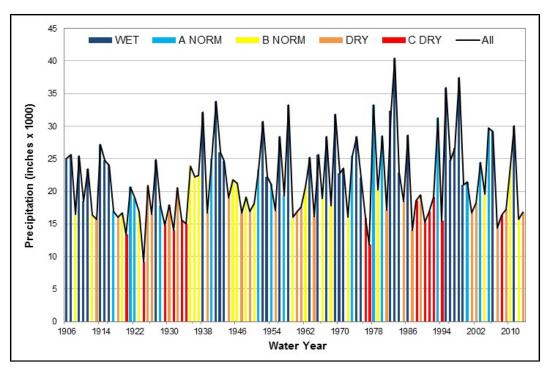
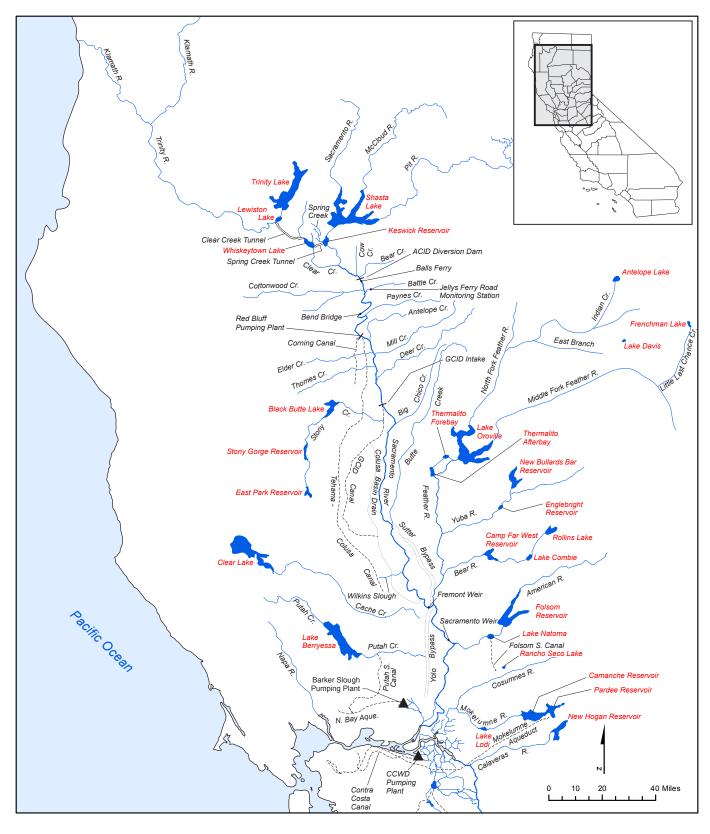


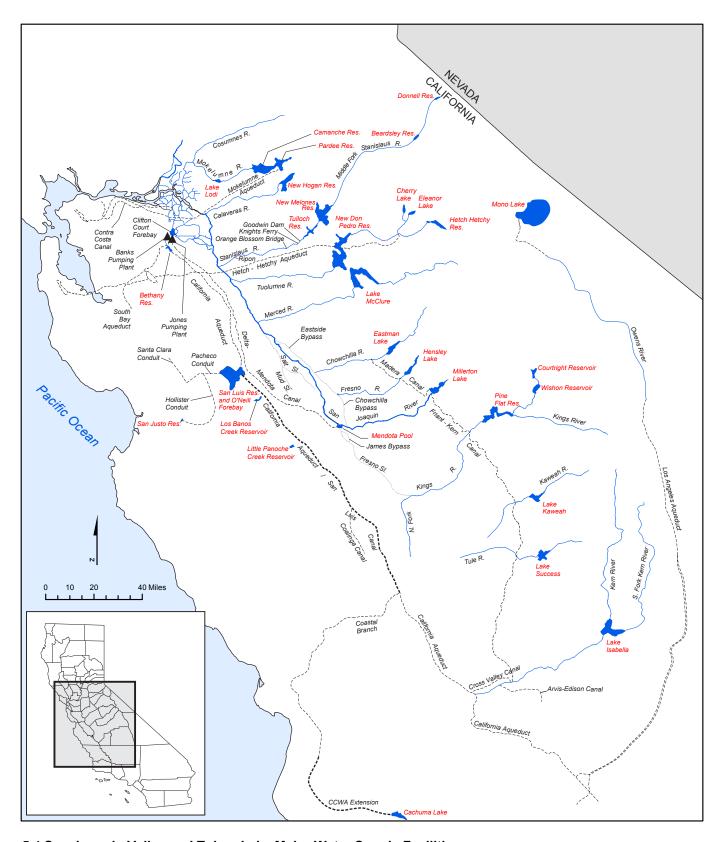
Figure 5.1 California Precipitation Trends



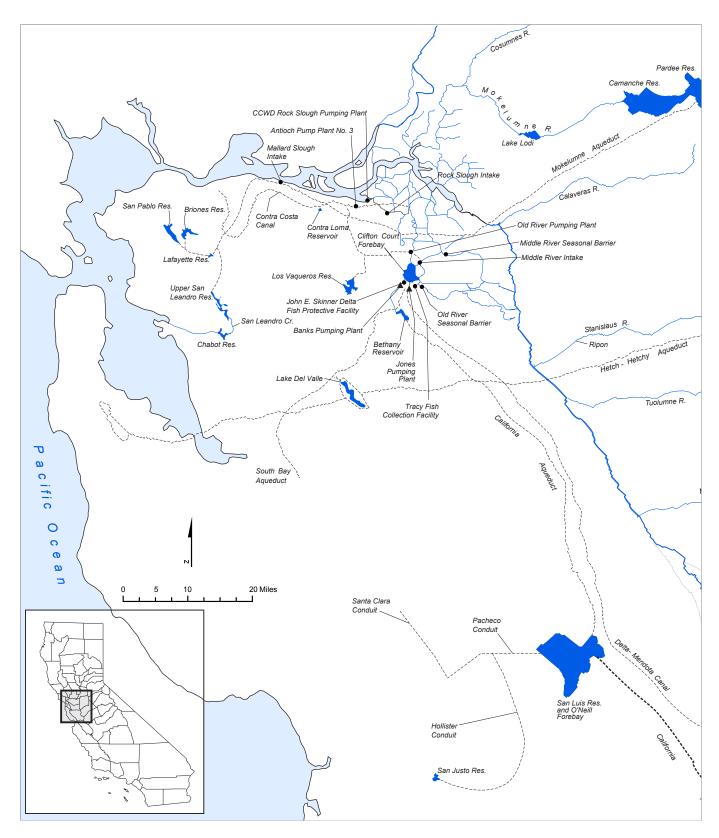
5.2 California Major Water Supply Facilities



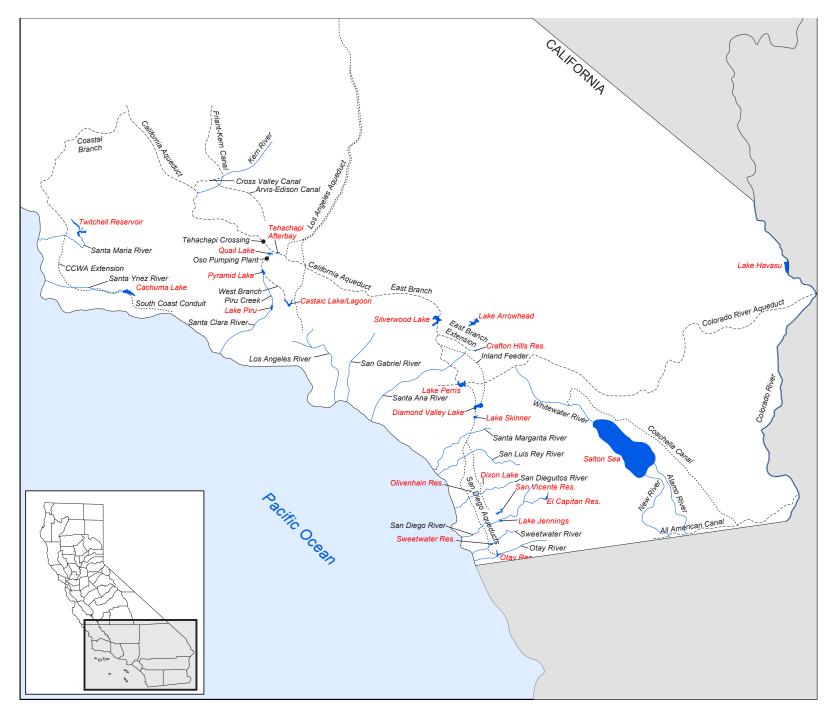
5.3 Northern California Major Water Supply Facilities



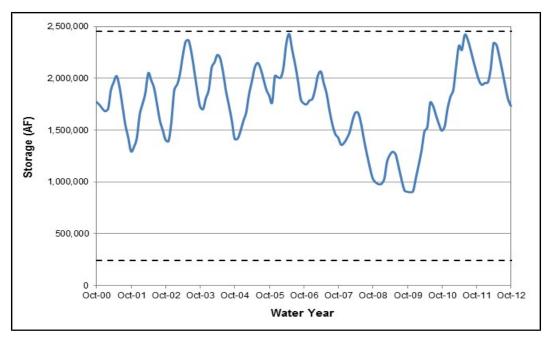
5.4 San Joaquin Valley and Tulare Lake Major Water Supply Facilities



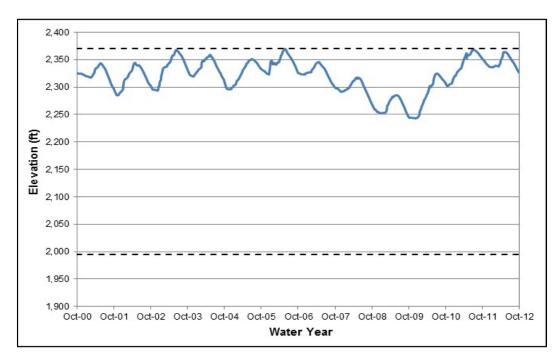
5.5 San Francisco Bay Area Major Water Supply Facilities



Supply Facilities and Southern California Major Water **Central Coast** 5.6



2 Figure 5.7 Historical Water Years 2001-2012 Trinity Lake Storage¹

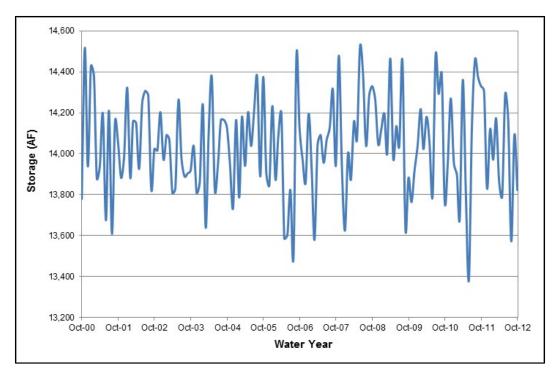


4 Figure 5.8 Historical Water Years 2001-2012 Trinity Lake Elevation²

1

¹ The minimum storage line of 240,000 AF was taken from CalSim II. The maximum storage line of 2,448,000 AF was taken from the California Data Exchange Center website http://cdec.water.ca.gov/misc/resinfo.html.

 $^{^{\}rm 2}$ The minimum elevation line of 1995 ft was taken from Reclamation's website http://www.usbr.gov/projects/Facility.jsp?fac_Name=Trinity+Dam&groupName=Dimensions. The maximum elevation line of 2,370 ft was provided by Reclamation.



2 Figure 5.9 Historical Water Years 2001-2012 Lewiston Reservoir Storage

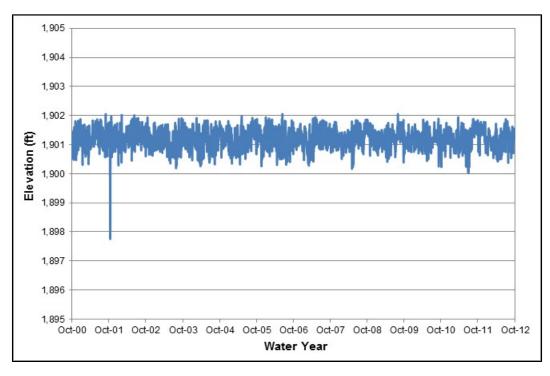


Figure 5.10 Historical Water Years 2001-2012 Lewiston Reservoir Elevation

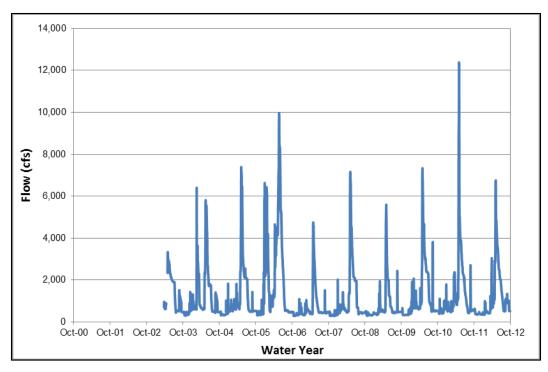


Figure 5.11 Historical Water Years 2003-2012 Trinity River Mean Daily Flows at Douglas City

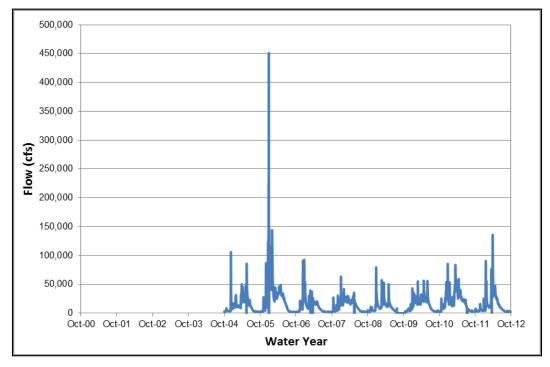


Figure 5.12 Historical Water Years 2005-2012 Klamath River Mean Daily Flows at Klamath

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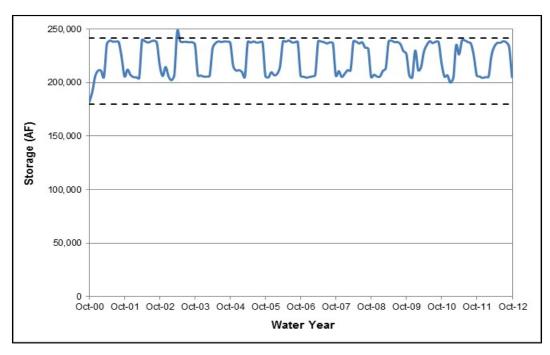


Figure 5.13 Historical Water Years 2001-2012 Whiskeytown Lake Storage³

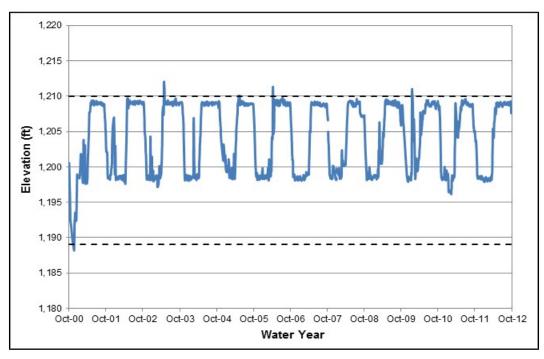
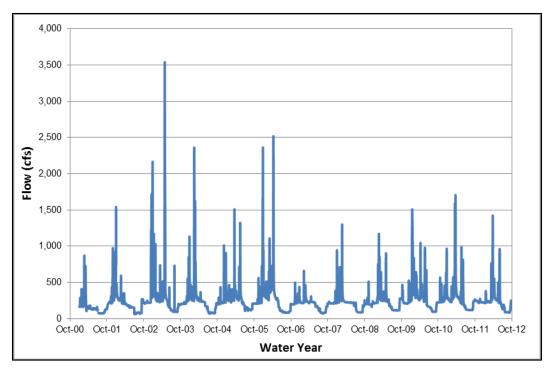


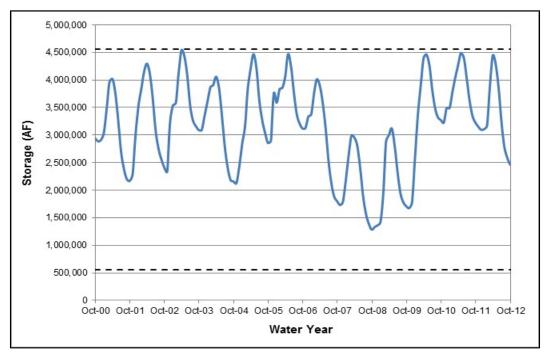
Figure 5.14 Historical Water Years 2001-2012 Whiskeytown Lake Elevation⁴

³ The minimum storage line of 180,000 AF was taken from CalSim II. The maximum storage line of 241,000 AF was taken from the California Data Exchange Center website http://cdec.water.ca.gov/misc/resinfo.html.

 $^{^4}$ The minimum elevation line of 1190 ft was taken from CalSim II. The maximum elevation line of 1,210 ft was provided by Reclamation.

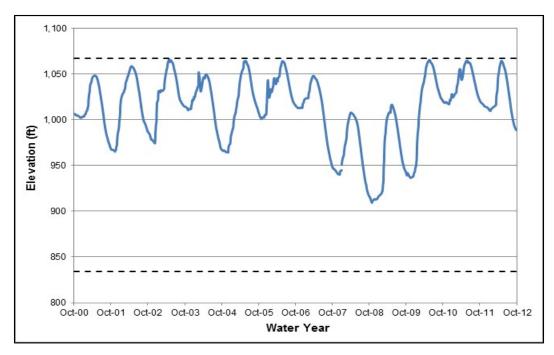


2 Figure 5.15 Historical Water Years 2001-2012 Clear Creek Mean Daily Flows at Igo

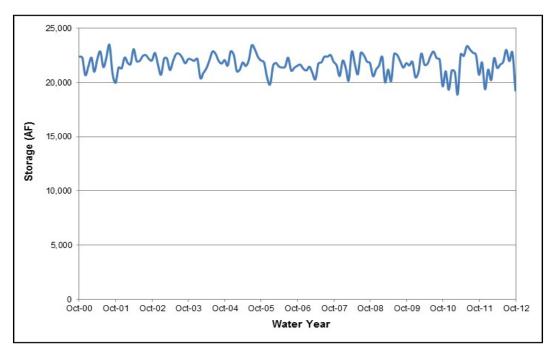


4 Figure 5.16 Historical Water Years 2001-2012 Shasta Lake Storage⁵

⁵ The minimum storage line of 550,000 AF was taken from CalSim II. The maximum storage line of 4,552,000 AF was taken from the California Data Exchange Center website http://cdec.water.ca.gov/misc/resinfo.html.



2 Figure 5.17 Historical Water Years 2001-2012 Shasta Lake Elevation⁶



4 Figure 5.18 Historical Water Year 2001 - 2012 Keswick Reservoir Storage

 $^{^6}$ The minimum elevation line of 834 ft was taken from CalSim II. The maximum elevation line of 1,067 ft was provided by Reclamation.

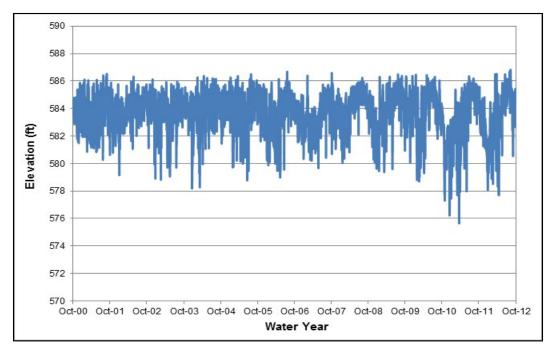


Figure 5.19 Historical Water Year 2001 - 2012 Keswick Reservoir Elevation

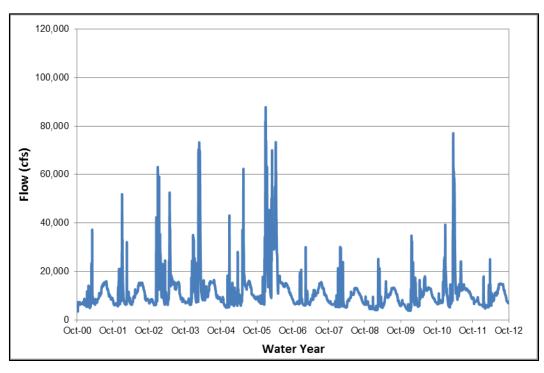


Figure 5.20 Historical Water Year 2001 - 2012 Sacramento River Mean Daily Flows at Bend Bridge

3 4

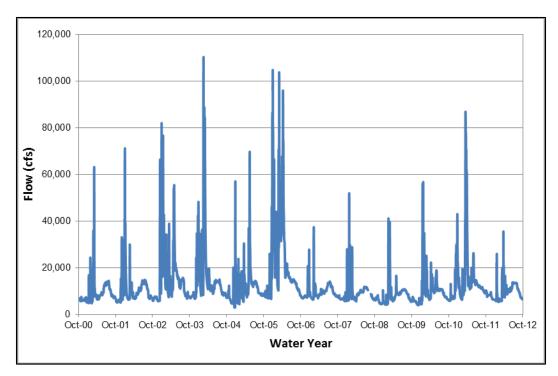


Figure 5.21 Historical Water Year 2001 - 2012 Sacramento River Mean Daily Flows at Vina Bridge

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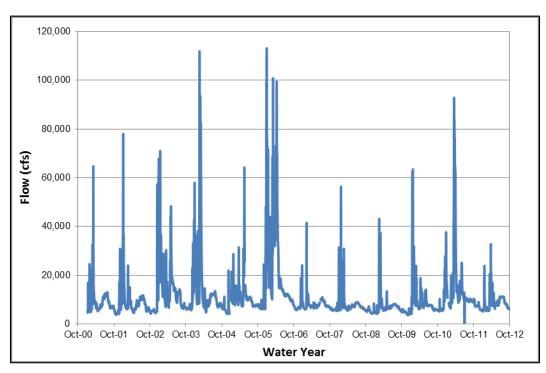


Figure 5.22 Historical Water Year 2001 - 2012 Sacramento River Mean Daily Flows at Hamilton City

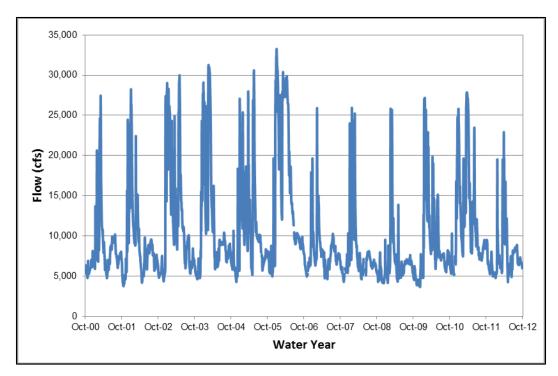


Figure 5.23 Historical Water Year 2001 - 2012 Sacramento River Mean Daily Flows at Wilkins Slough

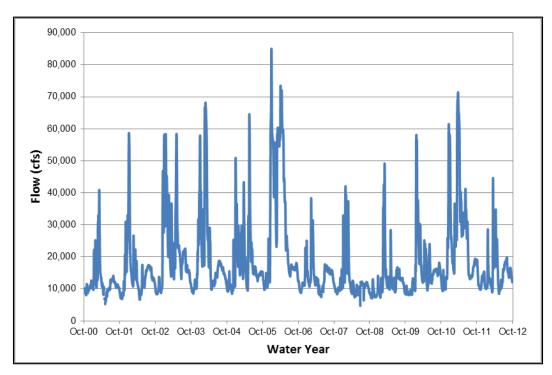


Figure 5.24 Historical Water Year 2001 - 2012 Sacramento River Mean Daily Flows at Verona

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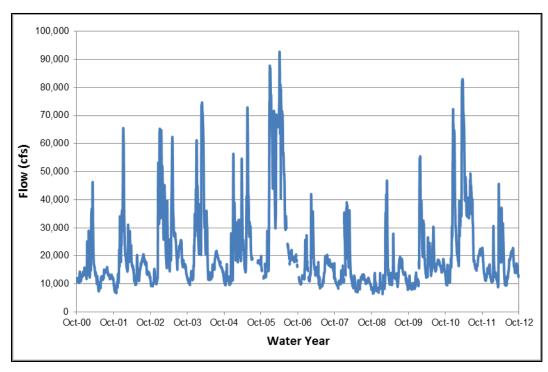


Figure 5.25 Historical Water Year 2001 - 2012 Sacramento River Mean Daily Flows at Freeport

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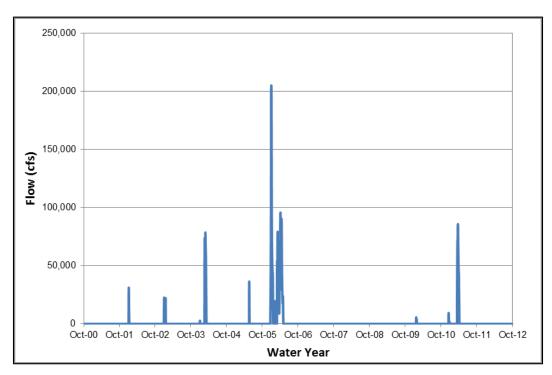
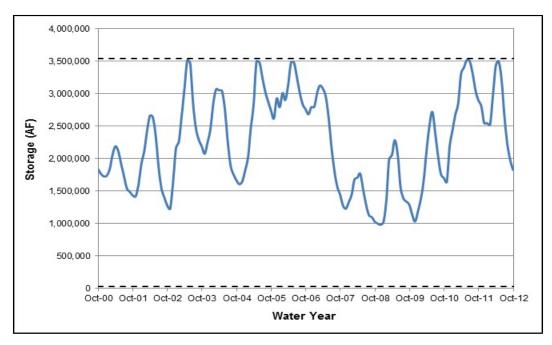
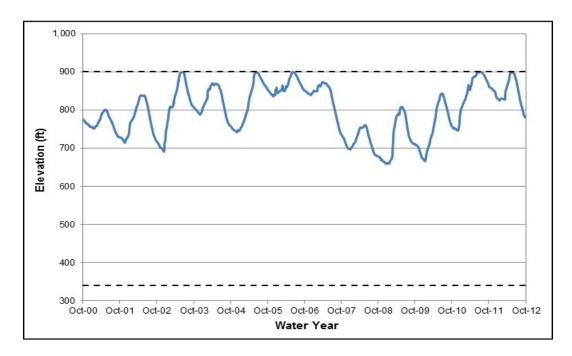


Figure 5.26 Historical Water Year 2001 - 2012 Flows into Yolo Bypass over Fremont Weir



2 Figure 5.27 Historical Water Year 2001 - 2012 Lake Oroville Storage⁷

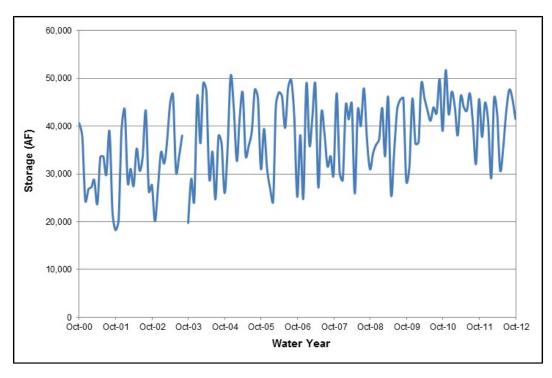


4 Figure 5.28 Historical Water Year 2001 - 2012 Lake Oroville Elevation⁸

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⁷ The minimum storage line of 30,000 AF was taken from CalSim II. The maximum storage line of 3,537,577 AF was taken from the California Data Exchange Center website http://cdec.water.ca.gov/misc/resinfo.html.

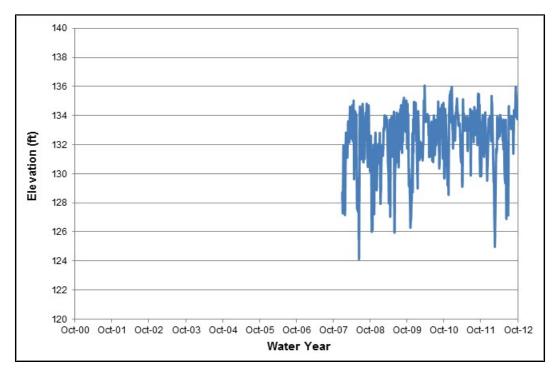
 $^{^8}$ The minimum elevation line of 340 ft was taken from CalSim II. The maximum elevation line of 900 ft was provided by Reclamation. Erroneous data on 7/9/2005 was deleted.



2 Figure 5.29 Historical Water Year 2001 - 2012 Thermalito Reservoir Storage

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4 Figure 5.30 Historical Water Year 2008 - 2012 Thermalito Reservoir Elevation

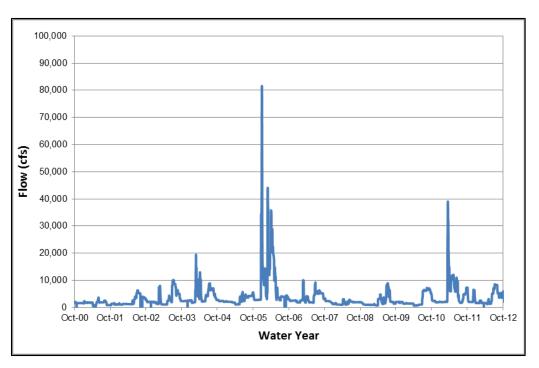


Figure 5.31 Historical Water Year 2001 - 2012 Feather River Mean Daily Flows near Gridley

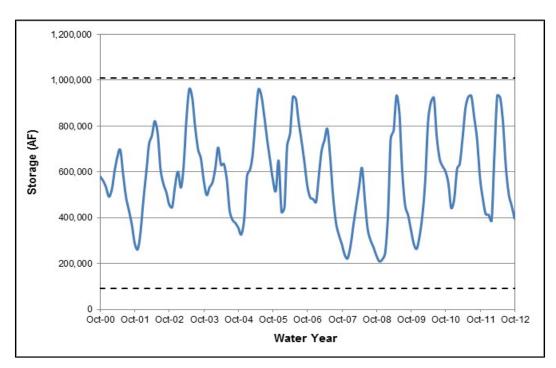
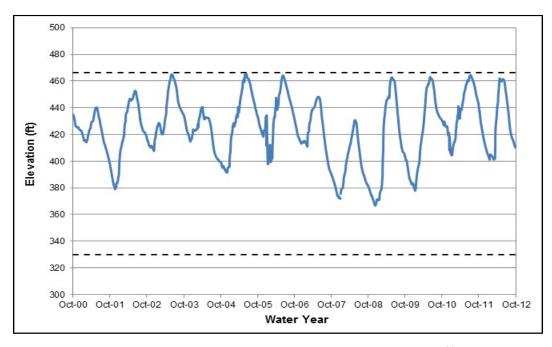


Figure 5.32 Historical Water Year 2001 - 2012 Folsom Lake Storage⁹

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⁹ The minimum storage line of 90,000 AF was taken from CalSim II. The maximum storage line of 977,000 AF was taken from the California Data Exchange Center website http://cdec.water.ca.gov/misc/resinfo.html.



2 Figure 5.33 Historical Water Year 2001 - 2012 Folsom Lake Elevation 10

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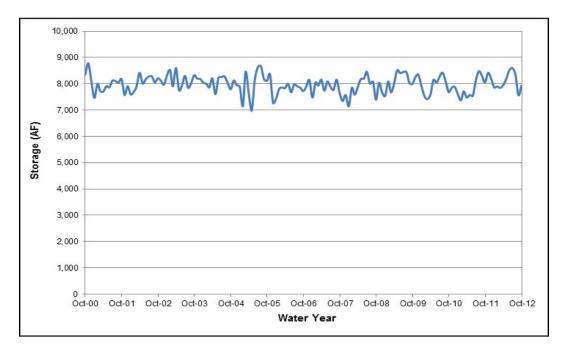
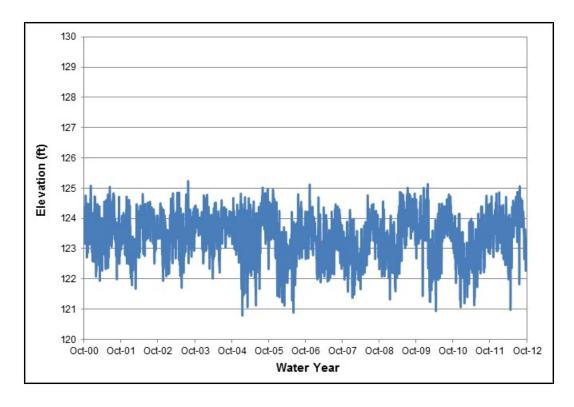


Figure 5.34 Historical Water Year 2001 - 2012 Lake Natoma Storage

 $^{^{10}}$ The minimum elevation line of 330 ft was taken from CalSim II. The maximum elevation line of 466 ft was provided by Reclamation.



2 Figure 5.35 Historical Water Year 2001 - 2012 Lake Natoma Elevation

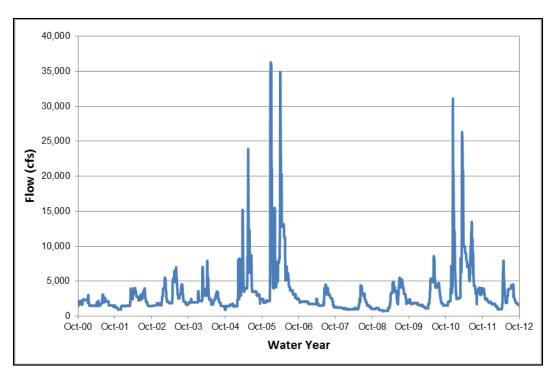


Figure 5.36 Historical Water Year 2001 - 2012 American River Mean Daily Flows at Fair Oaks

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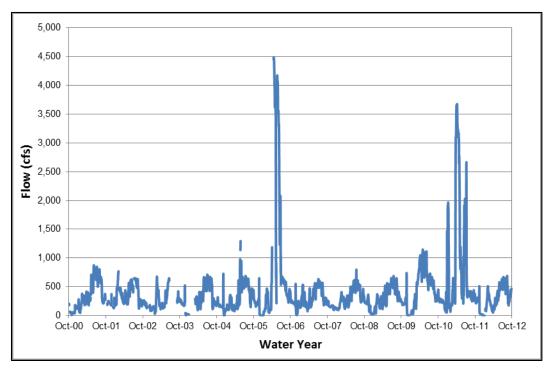


Figure 5.37 Historical Water Year 2001 - 2012 San Joaquin River Mean Daily Flows at Mendota

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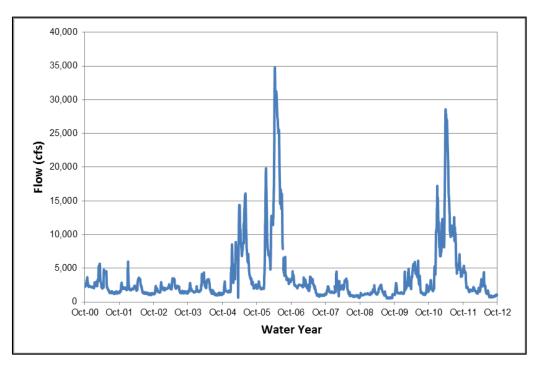
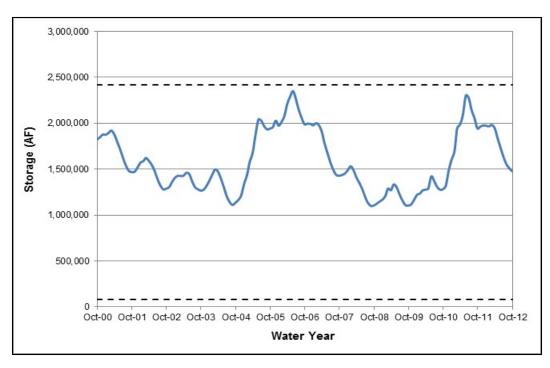


Figure 5.38 Historical Water Year 2001 - 2012 San Joaquin River Mean Daily Flows at Vernalis



2 Figure 5.39 Historical Water Year 2001 - 2012 New Melones Reservoir Storage¹¹

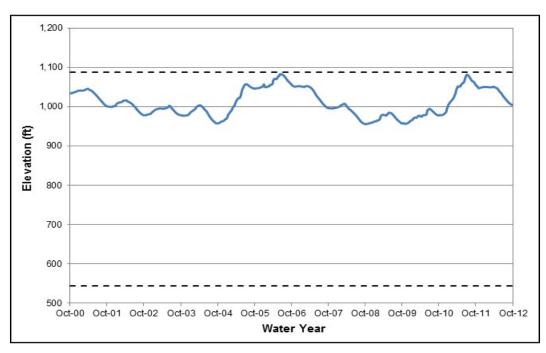
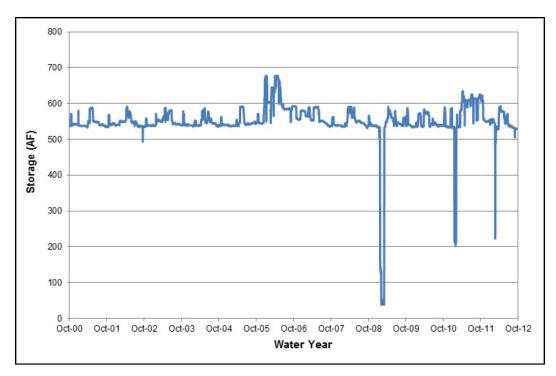


Figure 5.40 Historical Water Year 2001 - 2012 New Melones Reservoir Elevation 12

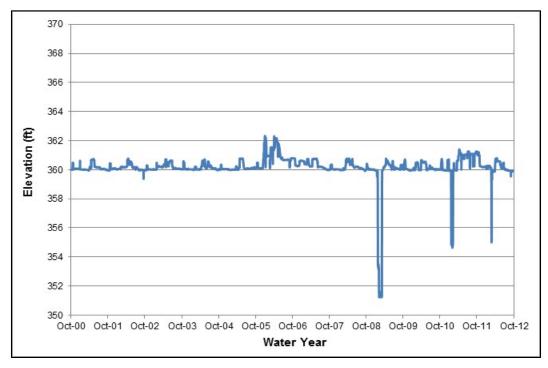
3 4

¹¹ The minimum storage line of 80,000 AF was taken from CalSim II. The maximum storage line of 2,400,000 AF was taken from the California Data Exchange Center website http://cdec.water.ca.gov/misc/resinfo.html.

¹² The dead pool elevation of 543 feet and normal pool elevation of 1,088 feet was taken from CalSim II.



2 Figure 5.41 Historical Water Year 2001 - 2012 Goodwin Reservoir Storage



4 Figure 5.42 Historical Water Year 2001 - 2012 Goodwin Reservoir Elevation 13

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¹³ Erroneous data on 10/30/2002 was removed.

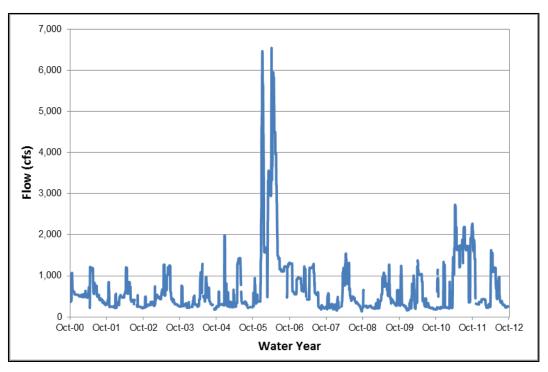


Figure 5.43 Historical Water Year 2001 - 2012 Stanislaus River Mean Daily Flows at Orange Blossom Bridge

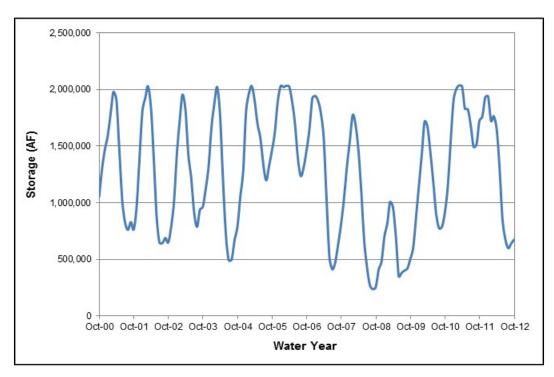
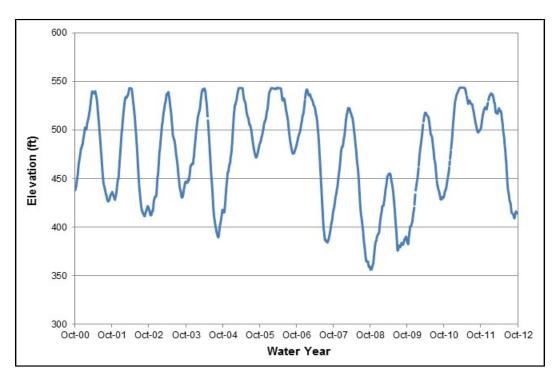


Figure 5.44 Historical Water Year 2001 - 2012 San Luis Reservoir Storage

23



2 Figure 5.45 Historical Water Year 2001 - 2012 San Luis Reservoir Elevation¹⁴

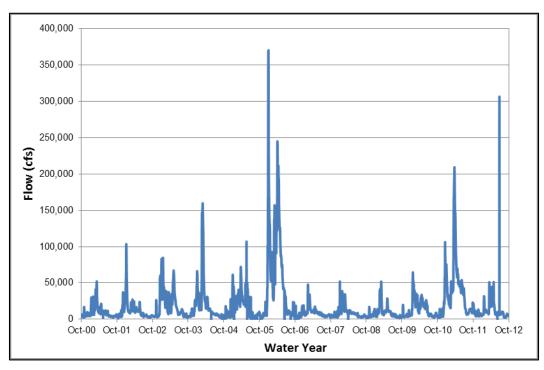


Figure 5.46 Historical Water Year 2001 - 2012 Delta Outflow Mean Daily Flows

 $^{^{14}}$ Erroneous data on 10/13/2003, 9/18/2007, and 7/19/2010 was removed.

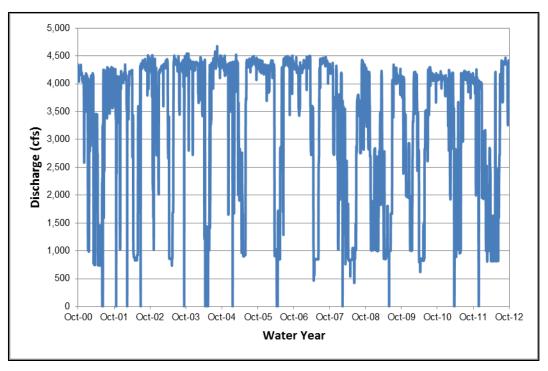


Figure 5.47 Historical Water Year 2001 - 2012 Jones Pumping Plant Mean Daily Flows

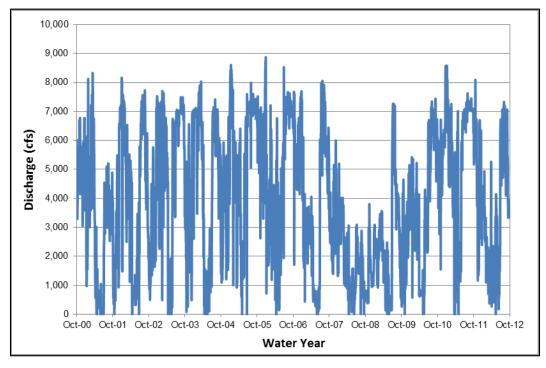


Figure 5.48 Historical Water Year 2001 - 2012 Banks Pumping Plant Mean Daily Flows

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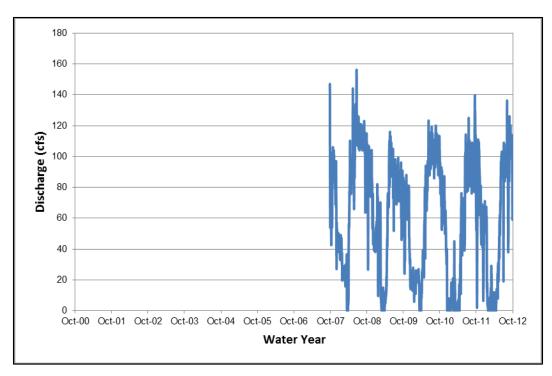


Figure 5.49 Historical Water Year 2008 - 2012 Barker Slough Pumping Plant Mean Daily Flows

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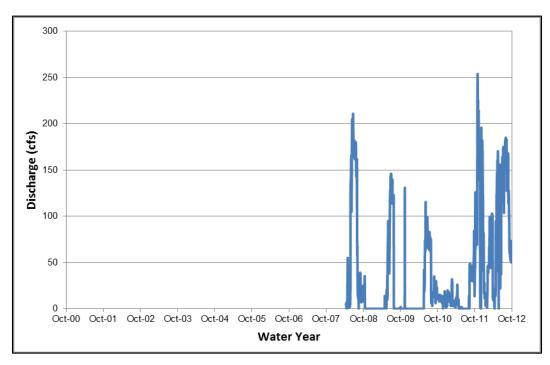


Figure 5.50 Water Year 2008 – 2012 Contra Costa Canal Rock Slough Intake Mean Daily Flows

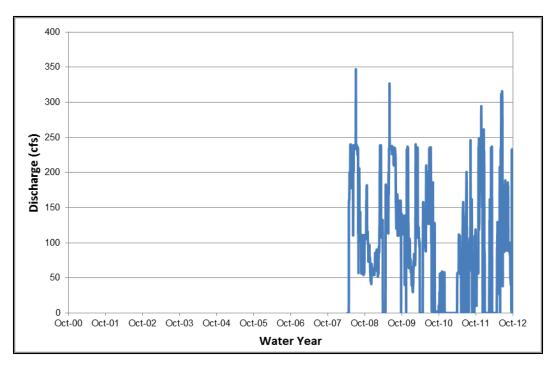


Figure 5.51 Historical Water Year 2008 - 2012 Contra Costa Water District Old River Intake Mean Daily Flows

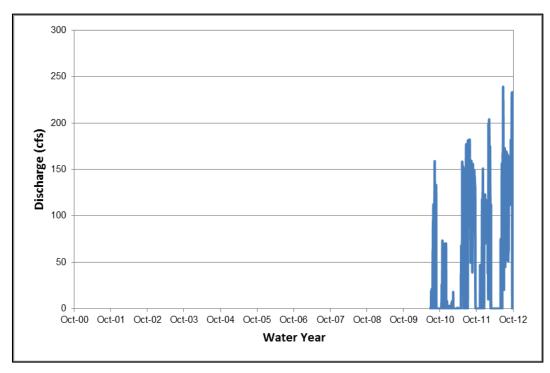


Figure 5.52 Historical Water Year 2010 - 2012 Contra Costa Water District Middle River Intake Mean Daily Flows

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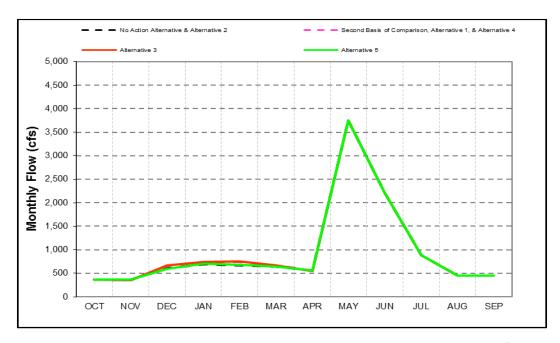


Figure 5.53 Trinity River below Lewiston Reservoir, Long-Term Average Flow 15

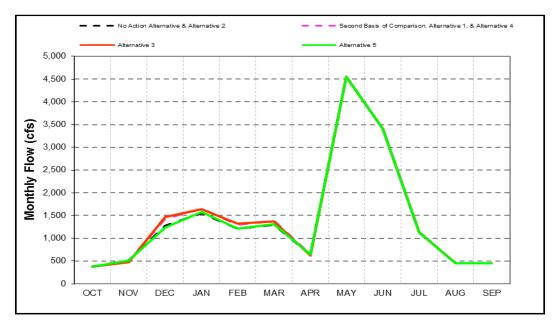


Figure 5.54 Trinity River below Lewiston Reservoir, Wet Year Long-Term Average Flow 15,16

5

¹⁵ Based on the 82-year simulation period; 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 Alternatives 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.

¹⁶ Wet-Year and Dry-Year as defined by the Sacramento 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999), projected to year 2030

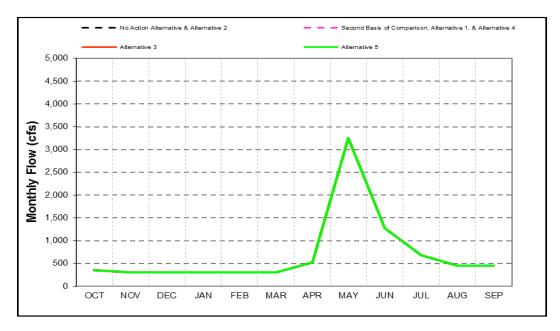


Figure 5.55 Trinity River below Lewiston Reservoir, Dry Year Long-Term Average Flow^{15,16}

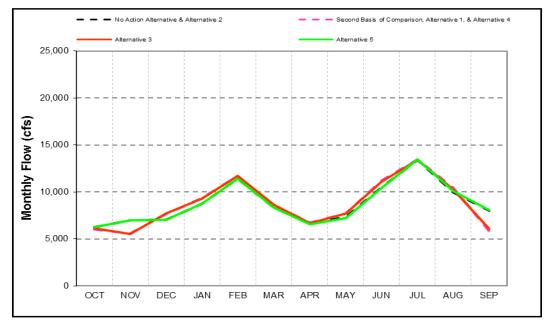


Figure 5.56 Sacramento River downstream of Keswick Reservoir, Long-Term

6 Average Flow¹⁵

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4 5

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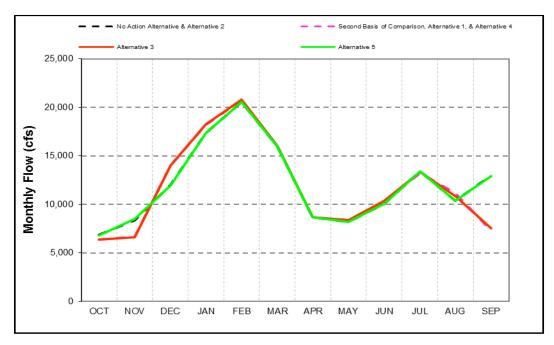


Figure 5.57 Sacramento River downstream of Keswick Reservoir, Wet Year Long-Term Average Flow 15,16

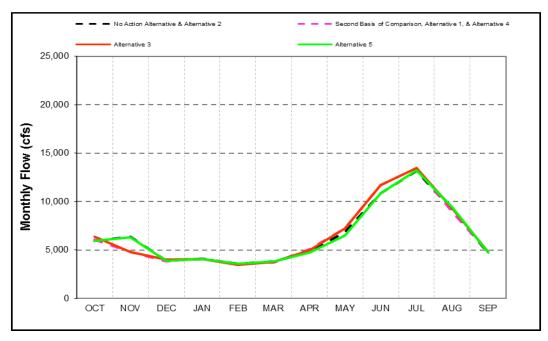
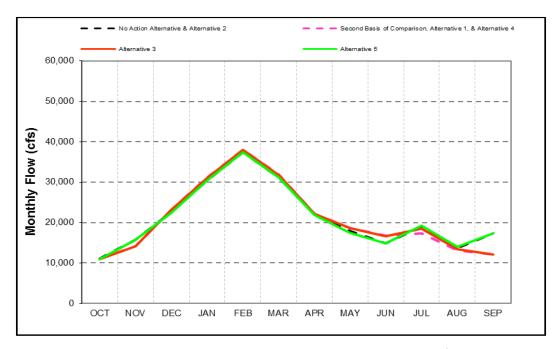
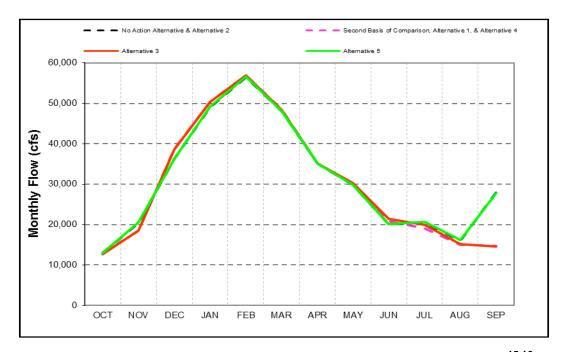


Figure 5.58 Sacramento River downstream of Keswick Reservoir, Dry Year Long-Term Average Flow 15,16

5-316

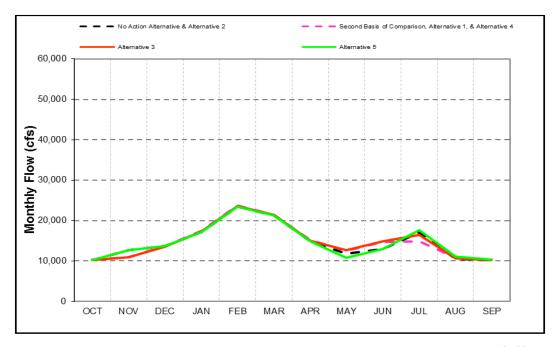


2 Figure 5.59 Sacramento River at Freeport, Long-Term Average Flow¹⁵

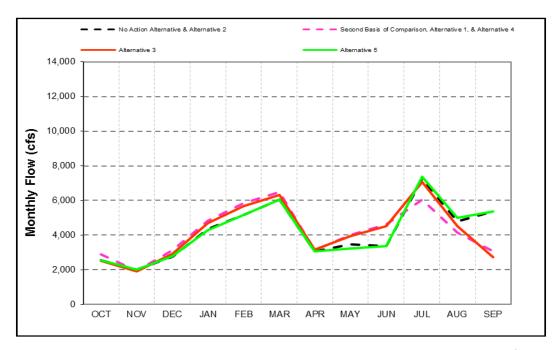


4 Figure 5.60 Sacramento River at Freeport, Wet Year Long-Term Average Flow 15,16

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2 Figure 5.61 Sacramento River at Freeport, Dry Year Long-Term Average Flow^{15,16}



4 Figure 5.62 Feather River downstream of Thermalito, Long-Term Average Flow 15

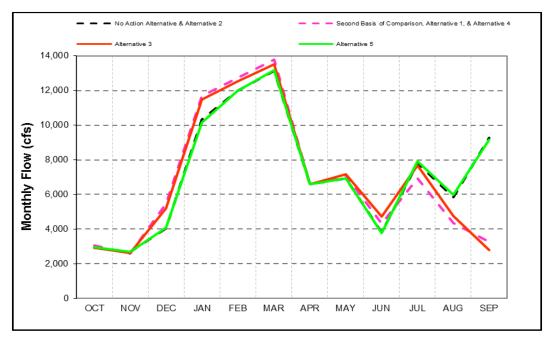


Figure 5.63 Feather River downstream of Thermalito, Wet Year Long-Term Average $Flow^{15,16}$

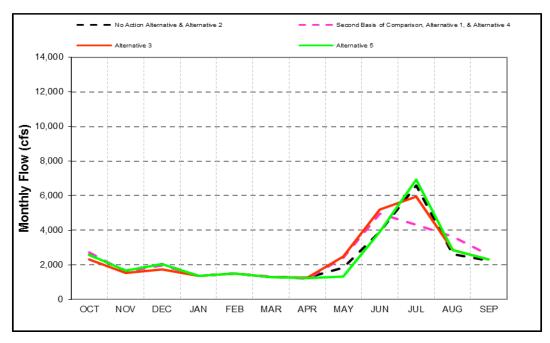


Figure 5.64 Feather River downstream of Thermalito, Dry Year Long-Term Average Flow^{15,16}

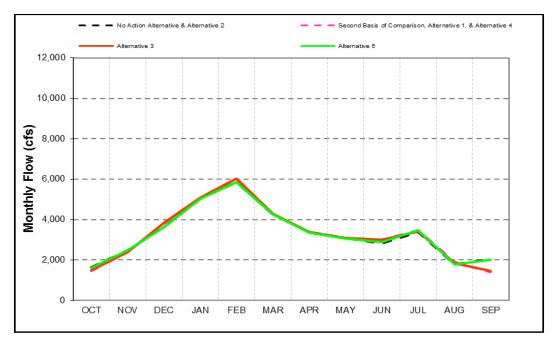


Figure 5.65 American River downstream of Nimbus Dam, Long-Term Average ${\sf Flow}^{15}$

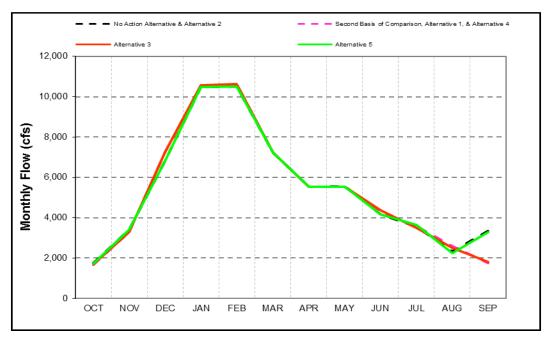


Figure 5.66 American River downstream of Nimbus Dam, Wet Year Long-Term Average Flow^{15,16}

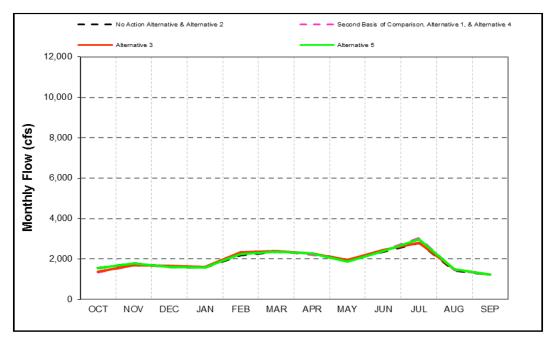


Figure 5.67 American River downstream of Nimbus Dam, Dry Year Long-Term Average Flow $^{\rm 15,16}$

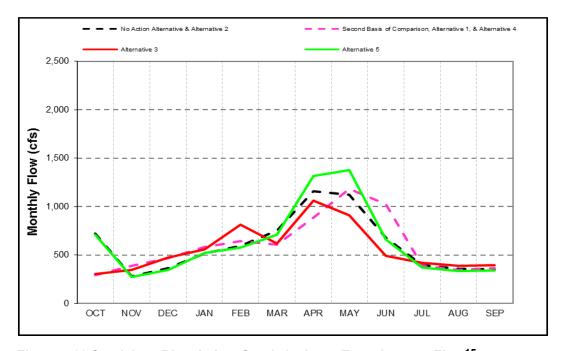


Figure 5.68 Stanislaus River below Goodwin, Long-Term Average Flow 15

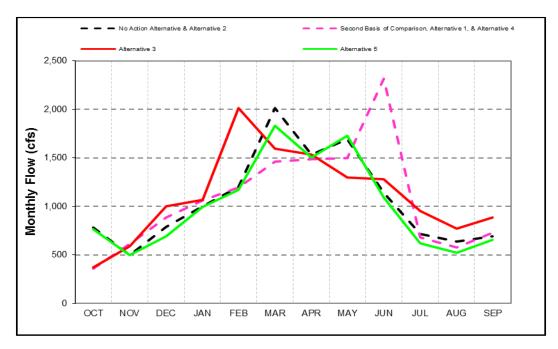


Figure 5.69 Stanislaus River below Goodwin, Wet Year Long-Term Average ${\sf Flow}^{15,16}$

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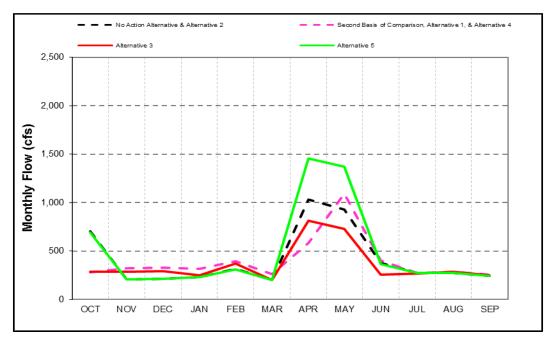
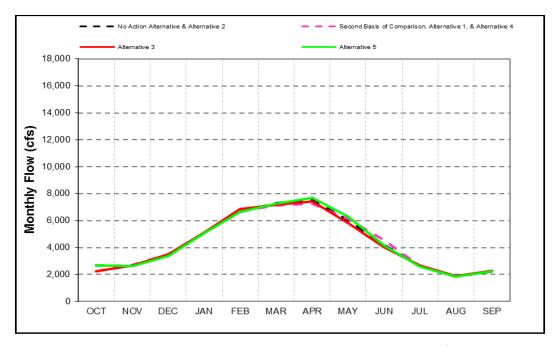
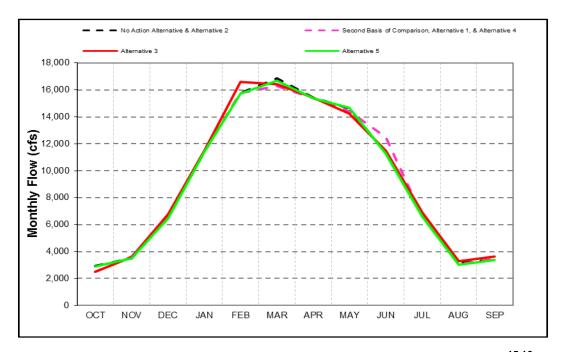


Figure 5.70 Stanislaus River below Goodwin, Dry Year Long-Term Average Flow^{15,16}



2 Figure 5.71 San Joaquin River at Vernalis, Long-Term Average Flow¹⁵



4 Figure 5.72 San Joaquin River at Vernalis, Wet Year Long-Term Average Flow 15,16

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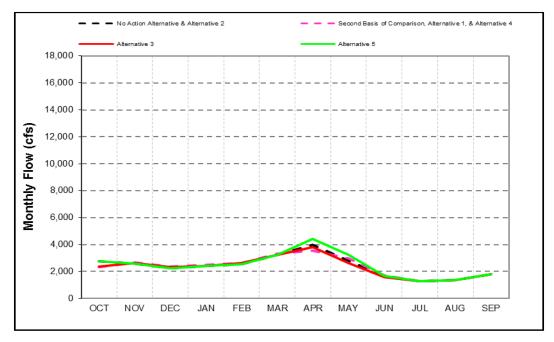


Figure 5.73 San Joaquin River at Vernalis, Dry Year Long-Term Average Flow 15,16

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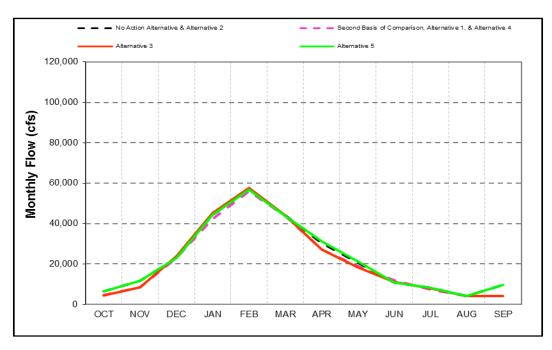


Figure 5.74 Sacramento/San Joaquin River Delta Outflow, Long-Term Average ${\sf Flow}^{15}$

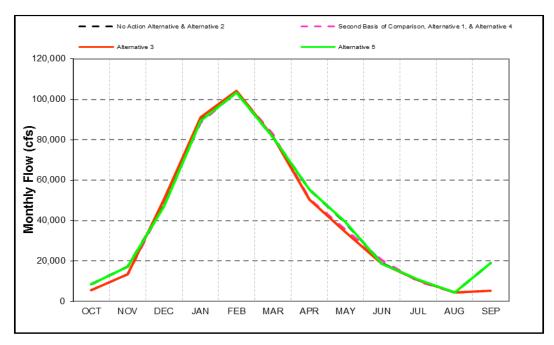


Figure 5.75 Sacramento/San Joaquin River Delta Outflow, Wet Year Long-Term Average FlowError! Bookmark not defined.

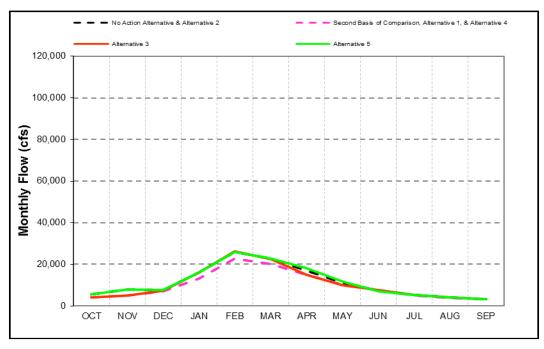


Figure 5.76 Sacramento/San Joaquin River Delta Outflow, Dry Year Long-Term Average Flow Error! Bookmark not defined.

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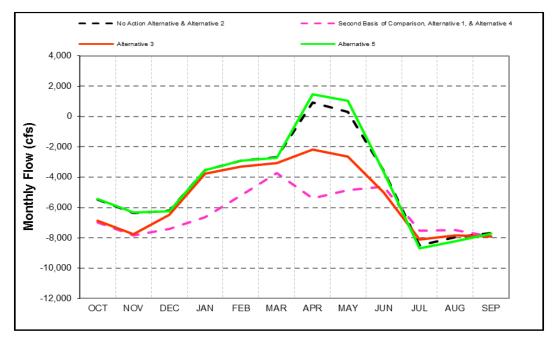


Figure 5.77 Old and Middle River, Long-Term Average FlowError! Bookmark not defined.

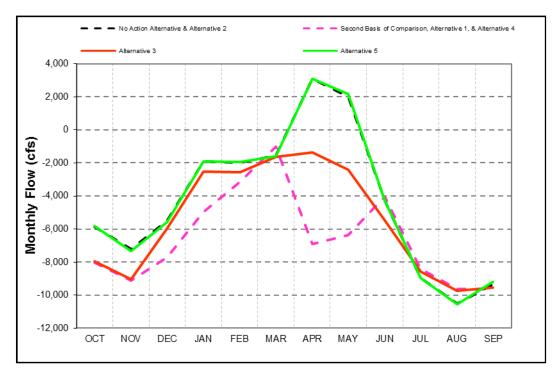


Figure 5.78 Old and Middle River, Wet Year Long-Term Average FlowError!

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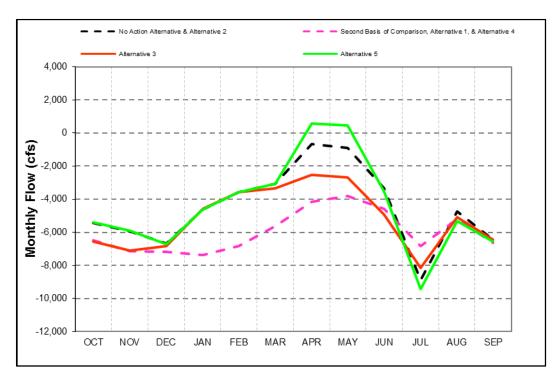


Figure 5.79 Old and Middle River, Dry Year Long-Term Average FlowError! Bookmark not defined. Error! Bookmark not defined.

