

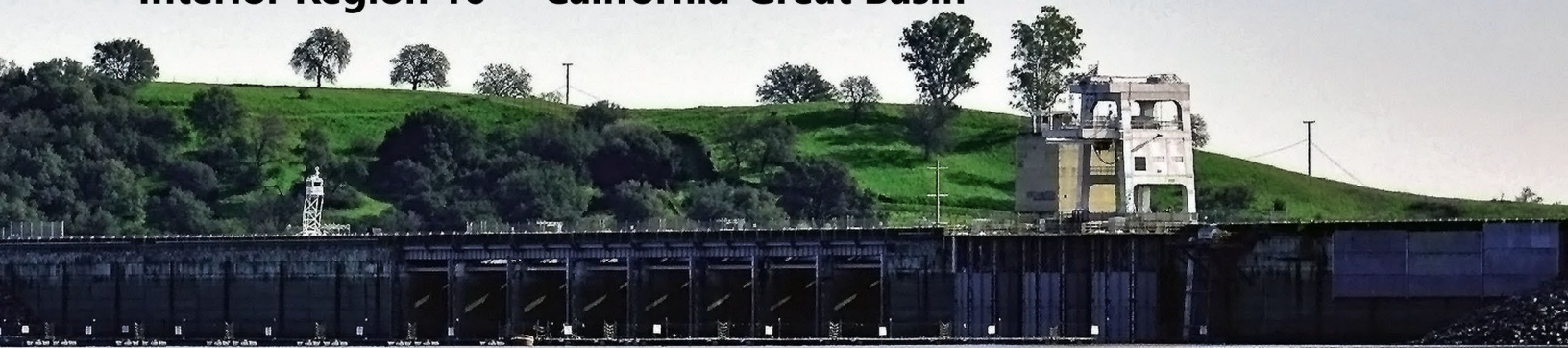


— BUREAU OF —
RECLAMATION

Appendix G

Adaptation Portfolios Evaluation Results

American River Basin Study
Interior Region 10 – California-Great Basin



Note: This appendix is a record of analysis for the ongoing study (2018 - 2022).
The main report may have updated information that is not reflected in this appendix.



CITY OF
FOLSOM
DISTINCTIVE BY NATURE



CITY OF
ROSEVILLE
CALIFORNIA



City of
SACRAMENTO



El Dorado
Water Agency



PCWA
PACIFIC COAST WATER ASSOCIATION



RYA
Regional Water Authority



SAFCA
Sacramento Area Flood Control Agency

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Appendix G
Adaptation Portfolios Evaluation Results

Table G-1. Performance of Adaptation Portfolios Relative to the Future Baseline Under 2070 Central Tendency Climate Scenario

Evaluation Metrics		2070 Future Baseline	Change Relative to the 2070 Future Baseline					Alder Creek Reservoir	Folsom Dam Raise with Groundwater Banking
			Importance of Long-Term CVP Water Contracts	Modified Flow Management Standard	Federally Recognized GW Bank	Sacramento River Diversion			
Water Supply Reliability									
System	System end-of-Sep Storage (Folsom/Shasta/Trinity/Oroville)	3946 TAF	+82 TAF (+2%)	-137 TAF (-3%)	-11 TAF (0%)	0 TAF (0%)	-1 TAF (0%)	0 TAF (0%)	
	Delta CVP Exports - Jones	1946 TAF	+20 TAF (+1%)	-1 TAF (0%)	+2 TAF (+0%)	-20 TAF (-1%)	+3 TAF (+0%)	0 TAF (0%)	
	Delta SWP Exports - Banks	2078 TAF	+48 TAF (+2%)	+2 TAF (+0%)	+2 TAF (+0%)	-3 TAF (0%)	-5 TAF (0%)	0 TAF (0%)	
American River Basin (ARB)	Upper Basin - Total End-of-September Storage	332 TAF	+0 TAF (+0%)	+7 TAF (+2%)	-1 TAF (0%)	0 TAF (0%)	+58 TAF (+18%)	0 TAF (0%)	
	Upper Basin - Total Demand	211 TAF	--	--	--	--	--	--	
	Upper Basin - Demand Met by Surface Water	134 TAF	0 TAF (0%)	0 TAF (0%)	0 TAF (0%)	+0 TAF (+0%)	+68 TAF (+51%)	0 TAF (0%)	
	Upper Basin - Unmet Demand	76 TAF	0 TAF (0%)	0 TAF (0%)	+0 TAF (+0%)	0 TAF (0%)	-68 TAF (-32%)	0 TAF (0%)	
	Lower Basin - Folsom End-of-September Storage	221 TAF	+11 TAF (+5%)	+188 TAF (+85%)	-1 TAF (-1%)	+23 TAF (+11%)	+1 TAF (+1%)	0 TAF (0%)	
	Lower Basin - Total Demand	1278 TAF	--	--	--	--	--	--	
	Lower Basin - Demand Met by Surface Water	803 TAF	-66 TAF (-8%)	-9 TAF (-1%)	-7 TAF (-1%)	+23 TAF (+3%)	-2 TAF (0%)	0 TAF (0%)	
	Lower Basin - Demand Met by Groundwater	466 TAF	+67 TAF (+14%)	+8 TAF (+2%)	+5 TAF (+1%)	-17 TAF (-4%)	+2 TAF (+0%)	0 TAF (0%)	
	Net Change in Annual Groundwater Basin Storage	N/A	-67 TAF (-14%)	-8 TAF (-2%)	+2 TAF (+0%)	+17 TAF (+4%)	-2 TAF (0%)	0 TAF (0%)	
Water Quality									
System	Total Delta Outflow	15050 TAF	-44 TAF (0%)	-34 TAF (0%)	-3 TAF (0%)	+15 TAF (+0%)	-53 TAF (0%)	0 TAF (0%)	
	% Months where Salinity at Rock Slough > 150 mg/l Cl	24%	+0.02 % (+2.4%)	-0.01 % (-0.5%)	+0 % (+0.4%)	+0 % (+0.2%)	+0 % (+0.4%)	0 TAF (0%)	
	% Months where Salinity at Rock Slough > 250 mg/l Cl	2%	+0.05 % (+5.1%)	0 % (-0.3%)	+0.01 % (+0.9%)	+0 % (+0.3%)	+0 % (+0.4%)	0 TAF (0%)	
Fish and Wildlife Habitat									
System	System end-of-April Storage (Folsom/Shasta/Trinity/Oroville)	8385 TAF	+47 TAF (+1%)	-185 TAF (-2%)	-5 TAF (0%)	-16 TAF (0%)	-4 TAF (0%)	0 TAF (0%)	
	Feb-Jun Delta Outflow (Spring X2)	9117 TAF	+16 TAF (+0%)	-59 TAF (-1%)	+5 TAF (+0%)	+7 TAF (+0%)	-31 TAF (0%)	0 TAF (0%)	
	Sep-Nov Delta Outflow (Fall X2)	1452 TAF	-18 TAF (-1%)	+19 TAF (+1%)	0 TAF (0%)	+6 TAF (+0%)	+2 TAF (+0%)	0 TAF (0%)	
ARB	Mar-May Folsom Storage	659 TAF	+2 TAF (+0%)	-10 TAF (-2%)	-1 TAF (0%)	+8 TAF (+1%)	-4 TAF (-1%)	0 TAF (0%)	
	Jun-Nov Folsom Storage	286 TAF	+13 TAF (+4%)	+162 TAF (+57%)	-2 TAF (-1%)	+21 TAF (+7%)	0 TAF (0%)	0 TAF (0%)	
	Mar-May Lower American River Flow	602 TAF	+10 TAF (+2%)	+0 TAF (+0%)	+2 TAF (+0%)	+14 TAF (+2%)	-23 TAF (-4%)	22 TAF (-4%)	
	Jun-Nov Lower American River Flow	733 TAF	+21 TAF (+3%)	-141 TAF (-19%)	+6 TAF (+1%)	+10 TAF (+1%)	+1 TAF (+0%)	0 TAF (0%)	
	% Months when Lower American River flows < 500 cfs	9%	-0.02 % (-2.4%)	-0.09 % (-8.8%)	-0.01 % (-0.5%)	-0.01 % (-1.4%)	+0 % (+0.3%)	0 TAF (0%)	
	% Months when Lower American River flows < 800 cfs	25%	-0.03 % (-2.7%)	-0.13 % (-12.7%)	-0.01 % (-0.6%)	-0.04 % (-3.7%)	+0 % (+0.4%)	0 TAF (0%)	
	American River Flow at Sacramento River Confluence	2025 TAF	+41 TAF (+2%)	-53 TAF (-3%)	+8 TAF (+0%)	+54 TAF (+3%)	-64 TAF (-3%)	0 TAF (0%)	
Flood Management									
ARB	Annual Folsom Reservoir Spills	512 TAF	+8 TAF (+2%)	-36 TAF (-7%)	-4 TAF (-1%)	+16 TAF (+3%)	-44 TAF (-9%)	-32 TAF (-6%)	
Recreation									
System	May-Sep Surface Area (Folsom/Shasta/Trinity/Oroville)	44.6 TA	+0.5 TA (+1.2%)	-0.3 TA (-0.7%)	-0.1 TA (-0.1%)	+0 TA (+0.1%)	0 TA (-0.1%)	0 TA (0%)	
ARB	May-Sep Folsom Reservoir Surface Area	6.4 TA	+0.1 TA (+2%)	+1.4 TA (+21.1%)	0 TA (-0.3%)	+0.2 TA (+2.9%)	0 TA (-0.4%)	0 TA (0%)	

Legend:

<2% change	2-5% Decrease (-)	>5% Decrease (-)	2-5% Increase (+)	>5% Increase (+)
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Note: change percentages do not necessarily indicate benefits or impacts. They indicate the extent to which a portfolio affects a given evaluation metrics.

Key:

cfs = cubic feet per second CVP = Central Valley Project GW = groundwater mg/l Cl = chloride concentration in milligram per liter N/A = Not Applicable SWP = State Water Project
TA = 1,000 acres TAF = 1,000 acre-feet X2 = Distance of the 2 parts per thousand salinity isohalines from the Golden Gate Bridge in kilometers.

Appendix G
Adaptation Portfolios Evaluation Results

Table G-2. Performance of Adaptation Portfolios Relative to the Future Baseline Under 2070 Hot-Dry Climate Scenario

Evaluation Metrics		2070 Future Baseline	Change Relative to the 2070 Future Baseline					
			Importance of Long-Term CVP Water Contracts	Modified Flow Management Standard	Federally Recognized GW Bank	Sacramento River Diversion	Alder Creek Reservoir	Folsom Dam Raise with Groundwater Banking
Water Supply Reliability								
System	System end-of-Sep Storage (Folsom/Shasta/Trinity/Oroville)	3495 TAF	+30 TAF (+1%)	-325 TAF (-9%)	-248 TAF (-7%)	-52 TAF (-1%)	-240 TAF (-7%)	0 TAF (0%)
	Delta CVP Exports - Jones	1920 TAF	+1 TAF (+0%)	-99 TAF (-5%)	-104 TAF (-5%)	-64 TAF (-3%)	-102 TAF (-5%)	0 TAF (0%)
	Delta SWP Exports - Banks	1974 TAF	+6 TAF (+0%)	-138 TAF (-7%)	-138 TAF (-7%)	-42 TAF (-2%)	-134 TAF (-7%)	0 TAF (0%)
American River Basin (ARB)	Upper Basin - Total End-of-September Storage	296 TAF	+1 TAF (+0%)	+8 TAF (+3%)	+0 TAF (+0%)	+2 TAF (+1%)	+49 TAF (+17%)	0 TAF (0%)
	Upper Basin - Total Demand	222 TAF	--	--	--	--	--	--
	Upper Basin - Demand Met by Surface Water	135 TAF	+0 TAF (+0%)	0 TAF (0%)	-1 TAF (0%)	+0 TAF (+0%)	+71 TAF (+53%)	0 TAF (0%)
	Upper Basin - Unmet Demand	87 TAF	0 TAF (0%)	+0 TAF (+0%)	+0 TAF (+0%)	0 TAF (0%)	-71 TAF (-32%)	0 TAF (0%)
	Lower Basin - Folsom End-of-September Storage	186 TAF	+5 TAF (+3%)	+167 TAF (+90%)	-13 TAF (-7%)	+19 TAF (+10%)	-14 TAF (-8%)	0 TAF (0%)
	Lower Basin - Total Demand	1332 TAF	--	--	--	--	--	--
	Lower Basin - Demand Met by Surface Water	789 TAF	-66 TAF (-8%)	-21 TAF (-3%)	-23 TAF (-3%)	+26 TAF (+3%)	-18 TAF (-2%)	0 TAF (0%)
	Lower Basin - Demand Met by Groundwater	533 TAF	+67 TAF (+13%)	+17 TAF (+3%)	+18 TAF (+3%)	-19 TAF (-4%)	+15 TAF (+3%)	0 TAF (0%)
	Net Change in Annual Groundwater Basin Storage	N/A	-67 TAF (-13%)	-17 TAF (-3%)	+5 TAF (+1%)	+19 TAF (+4%)	-15 TAF (-3%)	0 TAF (0%)
Water Quality								
System	Total Delta Outflow	13426 TAF	+24 TAF (+0%)	+255 TAF (+2%)	+269 TAF (+2%)	+89 TAF (+1%)	+189 TAF (+1%)	0 TAF (0%)
	% Months where Salinity at Rock Slough > 150 mg/l Cl	33%	+0 % (+0.2%)	-0.1 % (-9.8%)	-0.09 % (-8.8%)	-0.02 % (-2.3%)	-0.09 % (-8.6%)	0 TAF (0%)
	% Months where Salinity at Rock Slough > 250 mg/l Cl	20%	0 % (-0.3%)	-0.19 % (-18.7%)	-0.18 % (-18.3%)	-0.06 % (-5.6%)	-0.19 % (-18.6%)	0 TAF (0%)
Fish and Wildlife Habitat								
System	System end-of-April Storage (Folsom/Shasta/Trinity/Oroville)	7842 TAF	+29 TAF (+0%)	-258 TAF (-3%)	-129 TAF (-2%)	-28 TAF (0%)	-121 TAF (-2%)	0 TAF (0%)
	Feb-Jun Delta Outflow (Spring X2)	8121 TAF	+11 TAF (+0%)	-85 TAF (-1%)	-29 TAF (0%)	+0 TAF (+0%)	-74 TAF (-1%)	0 TAF (0%)
	Sep-Nov Delta Outflow (Fall X2)	1249 TAF	+5 TAF (+0%)					0 TAF (0%)
ARB	Mar-May Folsom Storage	600 TAF	+6 TAF (+1%)		0 TAF (0%)		-4 TAF (-1%)	0 TAF (0%)
	Jun-Nov Folsom Storage	239 TAF					-12 TAF (-5%)	0 TAF (0%)
	Mar-May Lower American River Flow	475 TAF			-4 TAF (-1%)			
	Jun-Nov Lower American River Flow	657 TAF						0 TAF (0%)
	% Months when Lower American River flows < 500 cfs	14%						0 TAF (0%)
	% Months when Lower American River flows < 800 cfs	33%			-0.01 % (-0.5%)			0 TAF (0%)
	American River Flow at Sacramento River Confluence	1805 TAF			+16 TAF (+1%)			0 TAF (0%)
Recreation								
System	Annual Folsom Reservoir Spills	454 TAF	+5 TAF (+1%)	-25 TAF (-6%)	-3 TAF (-1%)	+13 TAF (+3%)	-43 TAF (-9%)	-32 TAF (-7%)
System	May-Sep Surface Area (Folsom/Shasta/Trinity/Oroville)	41.1 TA	+0.2 TA (+0.6%)	-1.4 TA (-3.3%)	-1.4 TA (-3.4%)	-0.1 TA (-0.3%)	-1.3 TA (-3.3%)	0 TAF (0%)
ARB	May-Sep Folsom Reservoir Surface Area	5.8 TA	+0.1 TA (+1.6%)	+1.2 TA (+21.5%)	-0.2 TA (-3%)	+0.2 TA (+4.2%)	-0.2 TA (-3.2%)	0 TAF (0%)

Legend:



Note: change percentages do not necessarily indicate benefits or impacts. They indicate the extent to which a portfolio affects a given evaluation metrics.

Key:

cfs = cubic feet per second CVP = Central Valley Project GW = groundwater mg/l Cl = chloride concentration in milligram per liter N/A = Not Applicable SWP = State Water Project
 TA = 1,000 acres TAF = 1,000 acre-feet X2 = Distance of the 2 parts per thousand salinity isohalines from the Golden Gate Bridge in kilometers.

Appendix G
Adaptation Portfolios Evaluation Results

Table G-3. Performance of Adaptation Portfolios Relative to the Future Baseline Under 2070 Warm Wet Climate Scenario

Evaluation Metrics		2070 Future Baseline	Change Relative to the 2070 Future Baseline					Alder Creek Reservoir	Folsom Dam Raise with Groundwater Banking
			Importance of Long-Term CVP Water Contracts	Modified Flow Management Standard	Federally Recognized GW Bank	Sacramento River Diversion			
Water Supply Reliability									
System	System end-of-Sep Storage (Folsom/Shasta/Trinity/Oroville)	5421 TAF	+42 TAF (+1%)	-79 TAF (-1%)	-5 TAF (0%)	+21 TAF (+0%)	+16 TAF (+0%)	0 TAF (0%)	
	Delta CVP Exports - Jones	2200 TAF	+6 TAF (+0%)	+7 TAF (+0%)	+2 TAF (+0%)	-12 TAF (-1%)	+1 TAF (+0%)	0 TAF (0%)	
	Delta SWP Exports - Banks	2663 TAF	-4 TAF (0%)	-11 TAF (0%)	+1 TAF (+0%)	-13 TAF (0%)	+5 TAF (+0%)	0 TAF (0%)	
American River Basin (ARB)	Upper Basin - Total End-of-September Storage	386 TAF	+0 TAF (+0%)	+10 TAF (+3%)	0 TAF (0%)	-3 TAF (-1%)	+86 TAF (+22%)	0 TAF (0%)	
	Upper Basin - Total Demand	202 TAF	--	--	--	--	--	--	
	Upper Basin - Demand Met by Surface Water	137 TAF	+0 TAF (+0%)	0 TAF (0%)	0 TAF (0%)	+0 TAF (+0%)	+62 TAF (+45%)	0 TAF (0%)	
	Upper Basin - Unmet Demand	63 TAF	0 TAF (0%)	0 TAF (0%)	0 TAF (0%)	0 TAF (0%)	-62 TAF (-31%)	0 TAF (0%)	
	Lower Basin - Folsom End-of-September Storage	313 TAF	+15 TAF (+5%)	+177 TAF (+57%)	-2 TAF (-1%)	+37 TAF (+12%)	+12 TAF (+4%)	0 TAF (0%)	
	Lower Basin - Total Demand	1278 TAF	--	--	--	--	--	--	
	Lower Basin - Demand Met by Surface Water	835 TAF	-74 TAF (-9%)	-7 TAF (-1%)	-5 TAF (-1%)	+18 TAF (+2%)	0 TAF (0%)	0 TAF (0%)	
	Lower Basin - Demand Met by Groundwater	440 TAF	+73 TAF (+17%)	+6 TAF (+1%)	+1 TAF (+0%)	-17 TAF (-4%)	0 TAF (0%)	0 TAF (0%)	
	Net Change in Annual Groundwater Basin Storage	N/A	-73 TAF (-17%)	-6 TAF (-1%)	+3 TAF (+1%)	+17 TAF (+4%)	+0 TAF (+0%)	0 TAF (0%)	
Water Quality									
System	Total Delta Outflow	19768 TAF	+28 TAF (+0%)	-55 TAF (0%)	+1 TAF (+0%)	+18 TAF (+0%)	-65 TAF (0%)	0 TAF (0%)	
	% Months where Salinity at Rock Slough > 150 mg/l Cl	18%	+0 % (+0.3%)	+0 % (+0.1%)	+0 % (+0.4%)	0 % (0%)	0 % (-0.4%)	0 TAF (0%)	
	% Months where Salinity at Rock Slough > 250 mg/l Cl	1%	0 % (0%)	0 % (-0.2%)	0 % (-0.2%)	0 % (-0.4%)	0 % (-0.4%)	0 TAF (0%)	
Fish and Wildlife Habitat									
System	System end-of-April Storage (Folsom/Shasta/Trinity/Oroville)	9745 TAF	+23 TAF (+0%)	-99 TAF (-1%)	+5 TAF (+0%)	+8 TAF (+0%)	+9 TAF (+0%)	0 TAF (0%)	
	Feb-Jun Delta Outflow (Spring X2)	11404 TAF	+11 TAF (+0%)	-87 TAF (-1%)	+1 TAF (+0%)	-5 TAF (0%)	-42 TAF (0%)	0 TAF (0%)	
	Sep-Nov Delta Outflow (Fall X2)	1884 TAF	+0 TAF (+0%)	-1 TAF (0%)	-2 TAF (0%)	+5 TAF (+0%)	+2 TAF (+0%)	0 TAF (0%)	
ARB	Mar-May Folsom Storage	731 TAF	+3 TAF (+0%)	-15 TAF (-2%)	-1 TAF (0%)	+7 TAF (+1%)	-4 TAF (0%)	0 TAF (0%)	
	Jun-Nov Folsom Storage	394 TAF	+13 TAF (+3%)	+149 TAF (+38%)	-2 TAF (0%)	+33 TAF (+8%)	+6 TAF (+1%)	0 TAF (0%)	
	Mar-May Lower American River Flow	652 TAF	+9 TAF (+1%)	+1 TAF (+0%)	+2 TAF (+0%)	+15 TAF (+2%)	-25 TAF (-4%)	26 TAF (-4%)	
	Jun-Nov Lower American River Flow	860 TAF	+24 TAF (+3%)	-141 TAF (-16%)	+2 TAF (+0%)	+2 TAF (+0%)	+3 TAF (+0%)	0 TAF (0%)	
	% Months when Lower American River flows < 500 cfs	6%	-0.02 % (-1.6%)	-0.05 % (-5.5%)	-0.01 % (-1.1%)	-0.02 % (-2.2%)	0 % (-0.3%)	0 TAF (0%)	
	% Months when Lower American River flows < 800 cfs	15%	-0.03 % (-3%)	-0.11 % (-11.3%)	-0.01 % (-1%)	-0.04 % (-4.2%)	-0.01 % (-0.9%)	0 TAF (0%)	
	American River Flow at Sacramento River Confluence	2500 TAF	+45 TAF (+2%)	-86 TAF (-3%)	+4 TAF (+0%)	+65 TAF (+3%)	-60 TAF (-2%)	0 TAF (0%)	
Flood Management									
ARB	Annual Folsom Reservoir Spills	697 TAF	+9 TAF (+1%)	-60 TAF (-9%)	-5 TAF (-1%)	+20 TAF (+3%)	-44 TAF (-6%)	-19 TAF (-3%)	
Recreation									
System	May-Sep Surface Area (Folsom/Shasta/Trinity/Oroville)	53.8 TA	+0.3 TA (+0.5%)	+0 TA (+0%)	+0 TA (+0%)	+0.3 TA (+0.5%)	+0.1 TA (+0.2%)	0 TAF (0%)	
ARB	May-Sep Folsom Reservoir Surface Area	7.6 TA	+0.1 TA (+1.8%)	+1.2 TA (+15.5%)	0 TA (-0.1%)	+0.3 TA (+4.1%)	+0 TA (+0.6%)	0 TAF (0%)	

Legend:



Note: change percentages do not necessarily indicate benefits or impacts. They indicate the extent to which a portfolio affects a given evaluation metrics.

Key:

cfs = cubic feet per second CVP = Central Valley Project GW = groundwater mg/l Cl = chloride concentration in milligram per liter N/A = Not Applicable .. SWP = State Water Project
 TA = 1,000 acres TAF = 1,000 acre-feet X2 = Distance of the 2 parts per thousand salinity isohalines from the Golden Gate Bridge in kilometers.

Table G-4. 2070 Local Water Supply Composition under the Alder Creek Reservoir and Conservation Project Portfolio

Water Supply Source	2070 Central Tendency		2070 Hot-Dry		2070 Wet-Warm	
	Baseline	Portfolio	Baseline	Portfolio	Baseline	Portfolio
City of Folsom						
American River (Folsom Reservoir)	31	27	29	27	32	27
Groundwater	3	3	3	4	1	1
Alder Creek Reservoir	0	4	0	3	0	5
Total (TAF/Year)	34	34	32	34	33	33
El Dorado County						
American River (Folsom Reservoir)	25	16	23	17	24	15
License 11835 & 11836 (Jenkinson)	29	24	27	23	29	25
Project 184 (Forebay Diversions)	15	15	15	15	15	15
Permit 12827 (Stumpy Meadows)	12	11	12	11	12	12
Groundwater	0	0	0	0	0	0
Alder Creek Reservoir	0	43	0	46	0	34
SMUD Supplies (White Rock Diversion)	0	39	0	38	0	40
Total (TAF/Year)	80	148	78	149	81	141

Key:

TAF = 1,000 acre-feet

WFA= Water Forum Agreement

WTP = water treatment plant

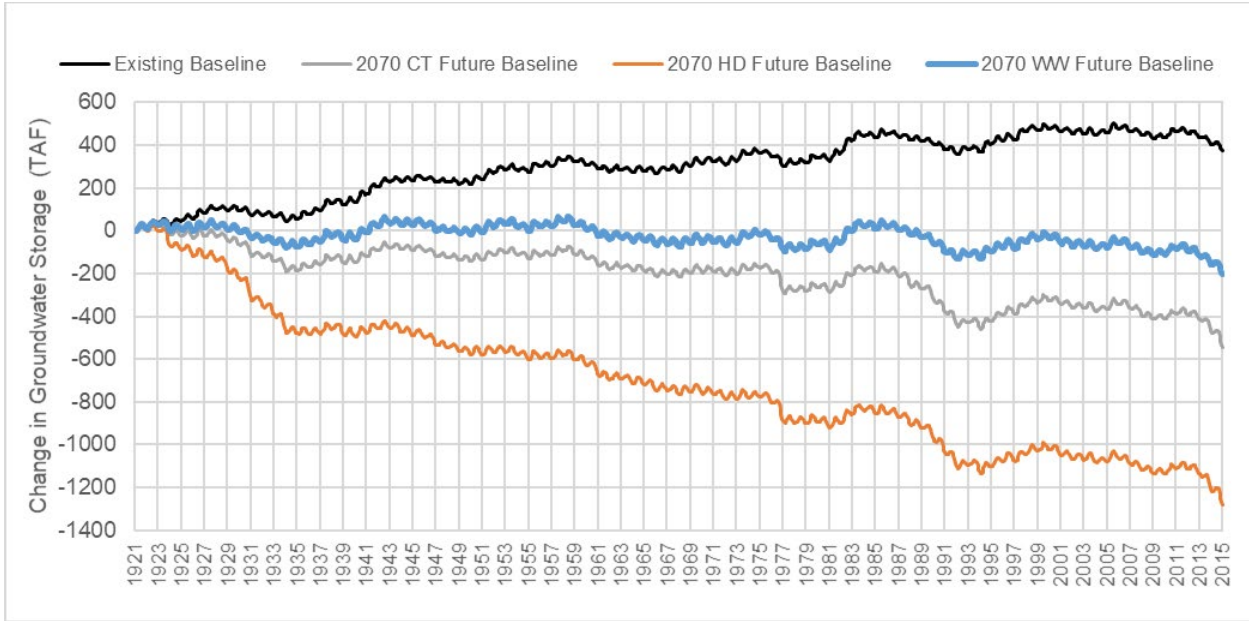


Figure G-1. Change in Groundwater Storage Over the Simulation Period in the North American River Groundwater Basin for Existing Baseline and 2070 Future Baselines

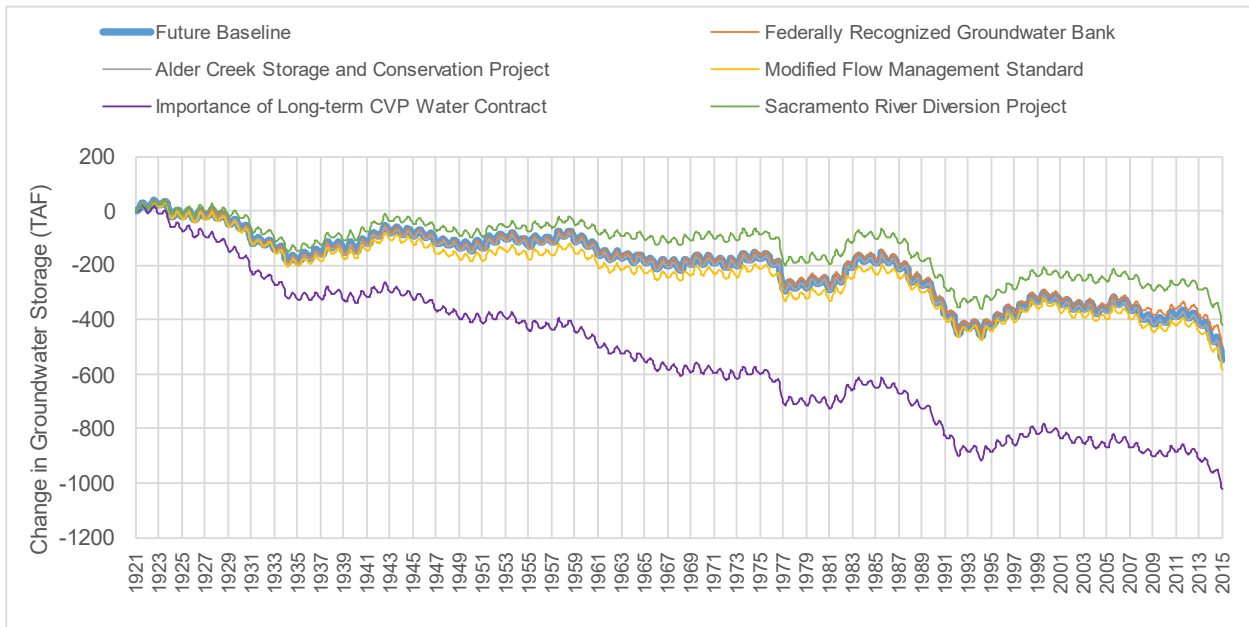


Figure G-2. Change in Groundwater Storage Over the Simulation Period in the North American River Groundwater Basin for Future Baseline and Adaptation Portfolios Under 2070 Central Tendency Climate Scenario

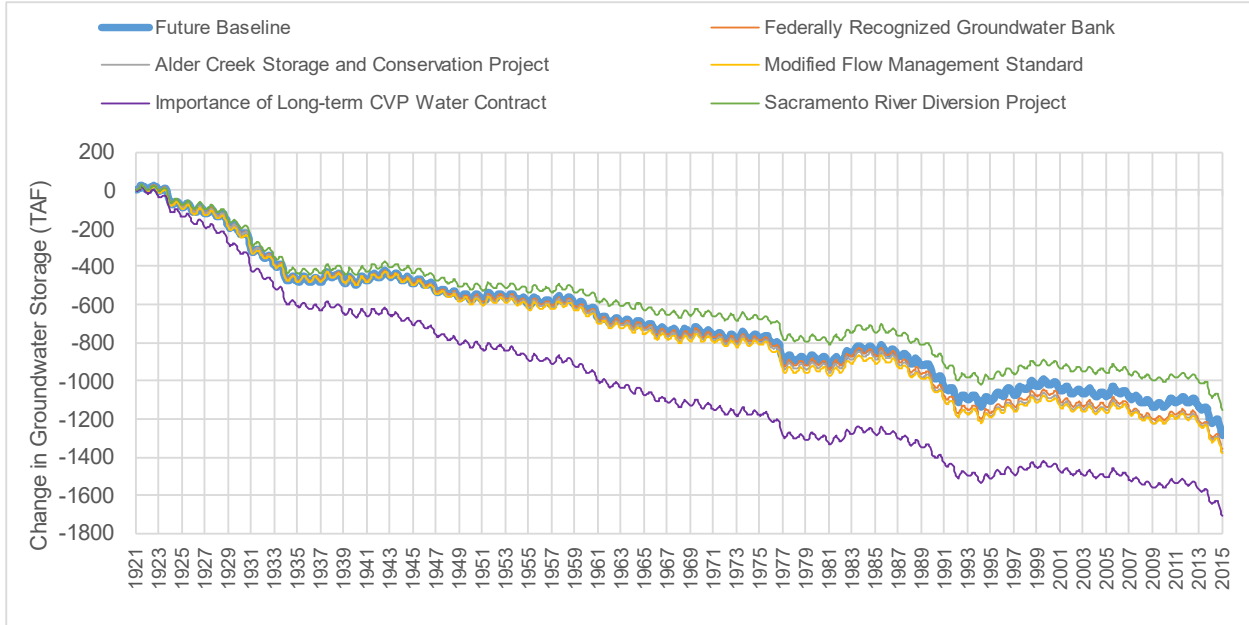


Figure G-3. Change in Groundwater Storage Over the Simulation Period in the North American River Groundwater Basin for Future Baseline and Adaptation Portfolios Under 2070 Hot Dry Climate Scenario

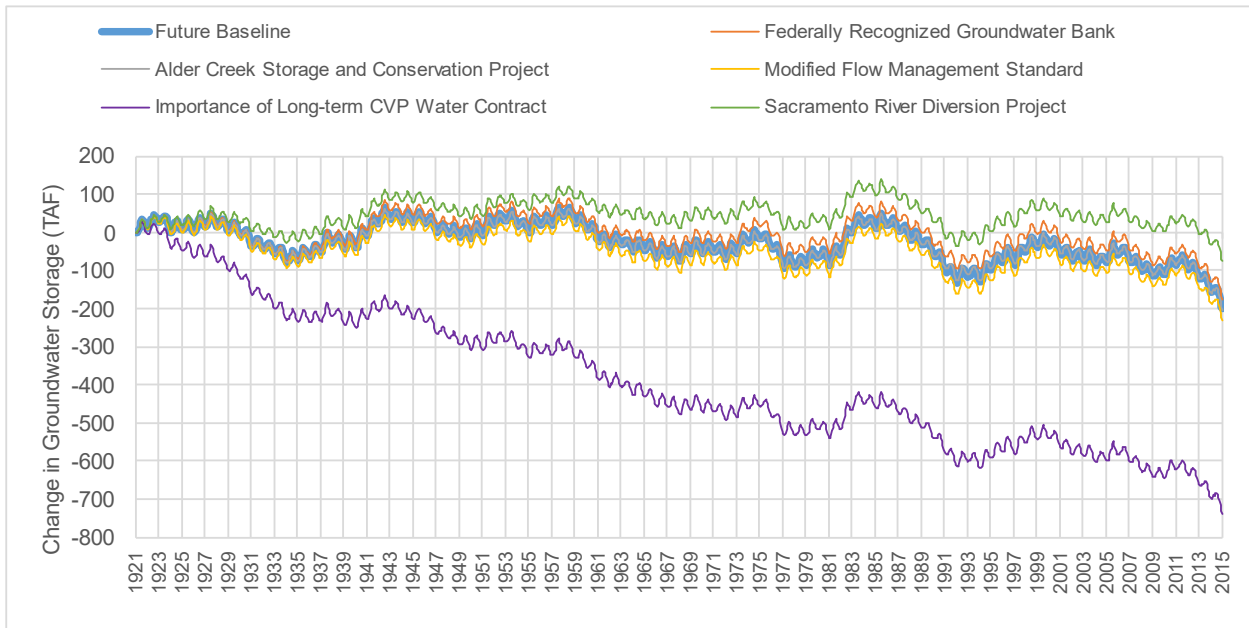


Figure G-4. Change in Groundwater Storage Over the Simulation Period in the North American River Groundwater Basin for Future Baseline and Adaptation Portfolios Under 2070 Wet Warm Climate Scenario

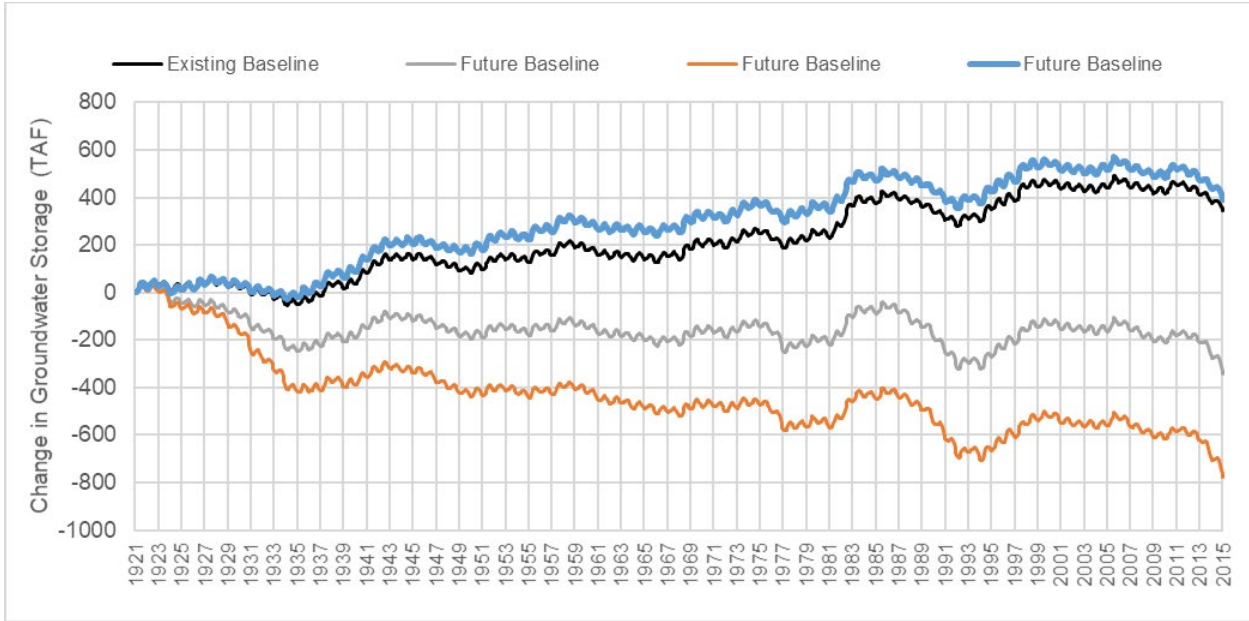


Figure G-5. Change in Groundwater Storage Over the Simulation Period in the South American River Groundwater Basin for Existing Baseline and 2070 Future Baselines

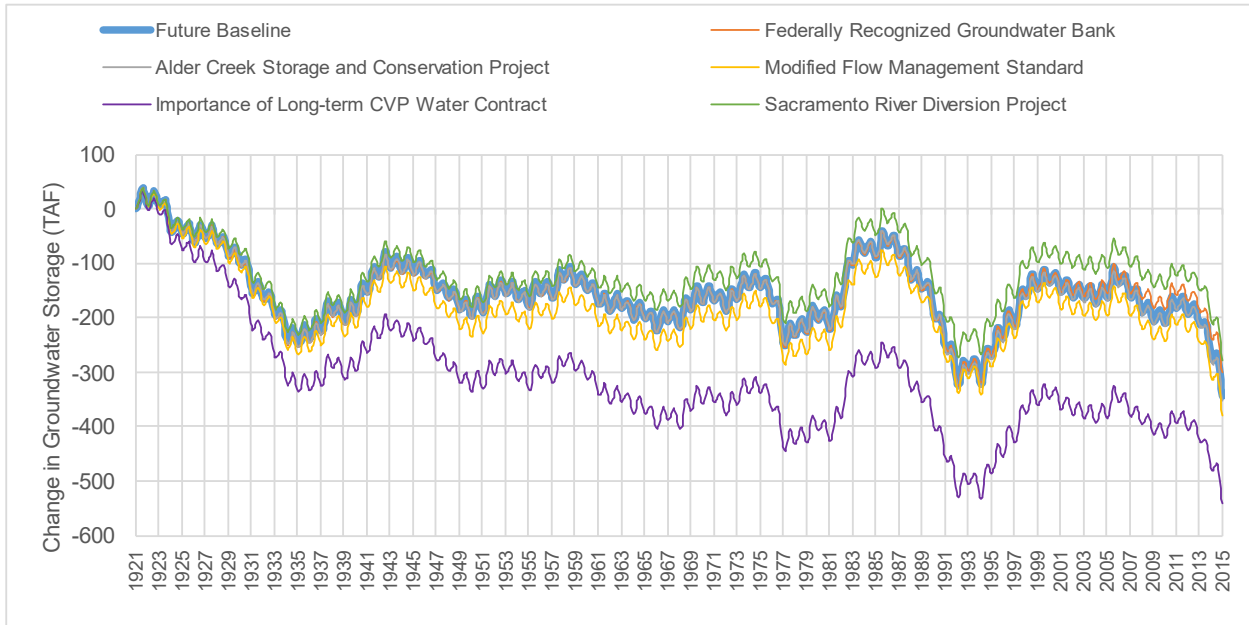


Figure G-6. Change in Groundwater Storage Over the Simulation Period in the South American River Groundwater Basin for Future Baseline and Adaptation Portfolios Under 2070 Central Tendency Climate Scenario

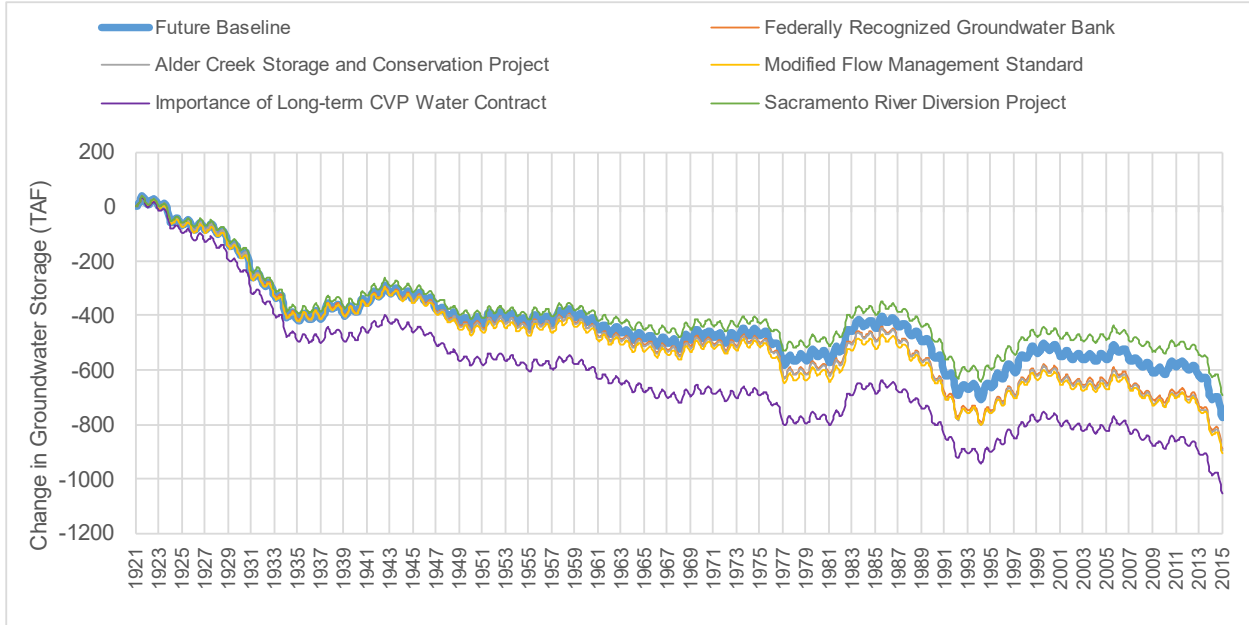


Figure G-7. Change in Groundwater Storage Over the Simulation Period in the South American River Groundwater Basin for Future Baseline and Adaptation Portfolios Under 2070 Hot Dry Climate Scenario

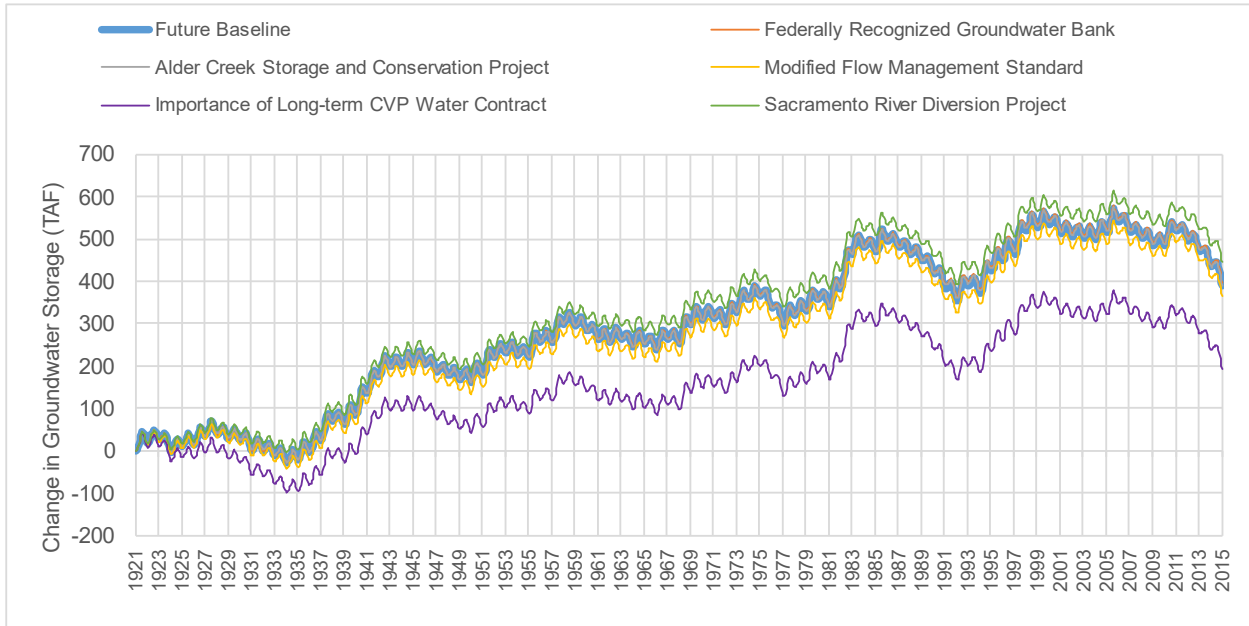


Figure G-8. Change in Groundwater Storage Over the Simulation Period in the South American River Groundwater Basin for Future Baseline and Adaptation Portfolios Under 2070 Wet Warm Climate Scenario

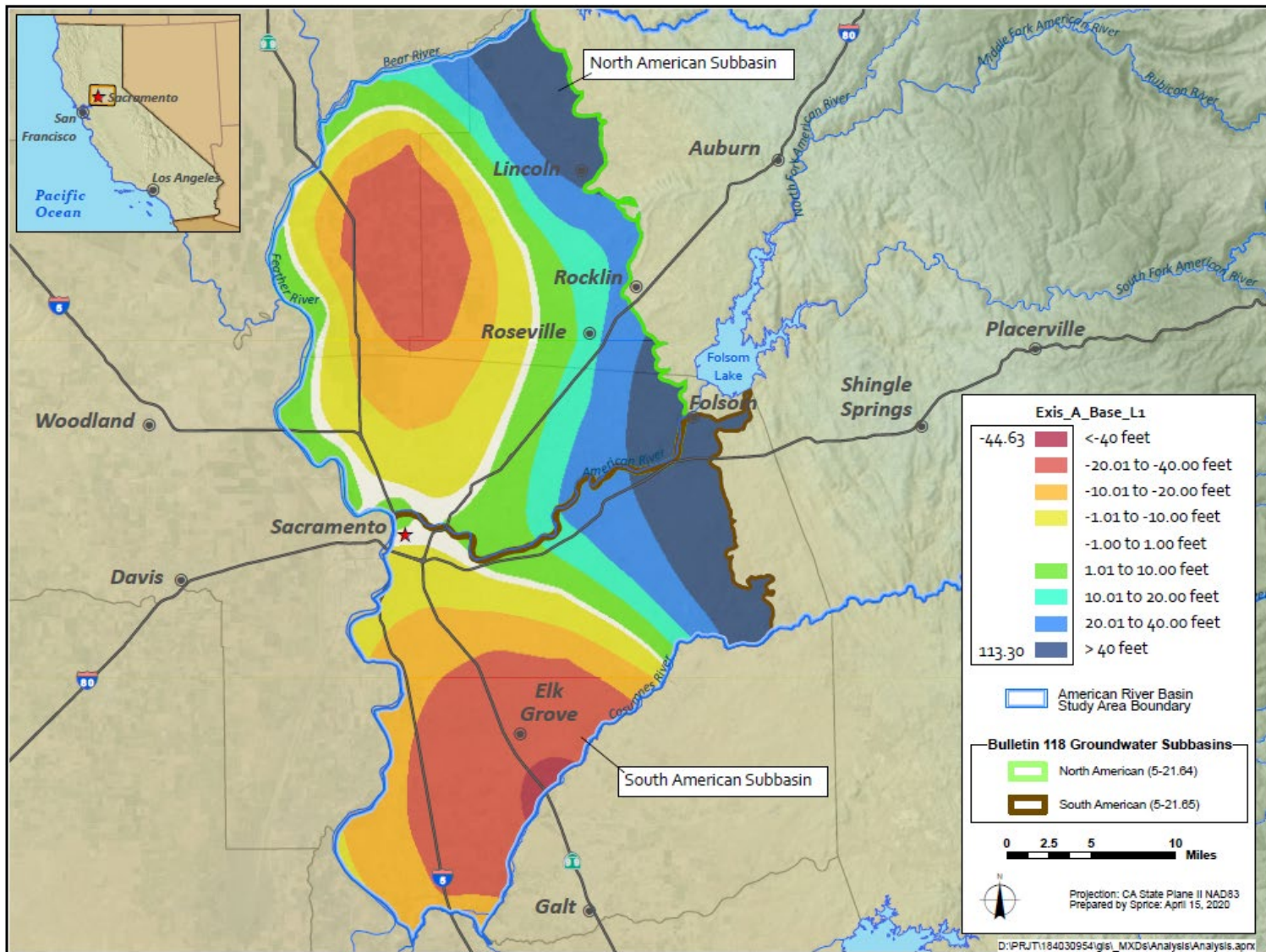


Figure G-9. Groundwater Elevation Contour Map of Existing Conditions, 2015 Level of Development Under 1922 to 2015 Hydrology (Shallow Groundwater Aquifer)

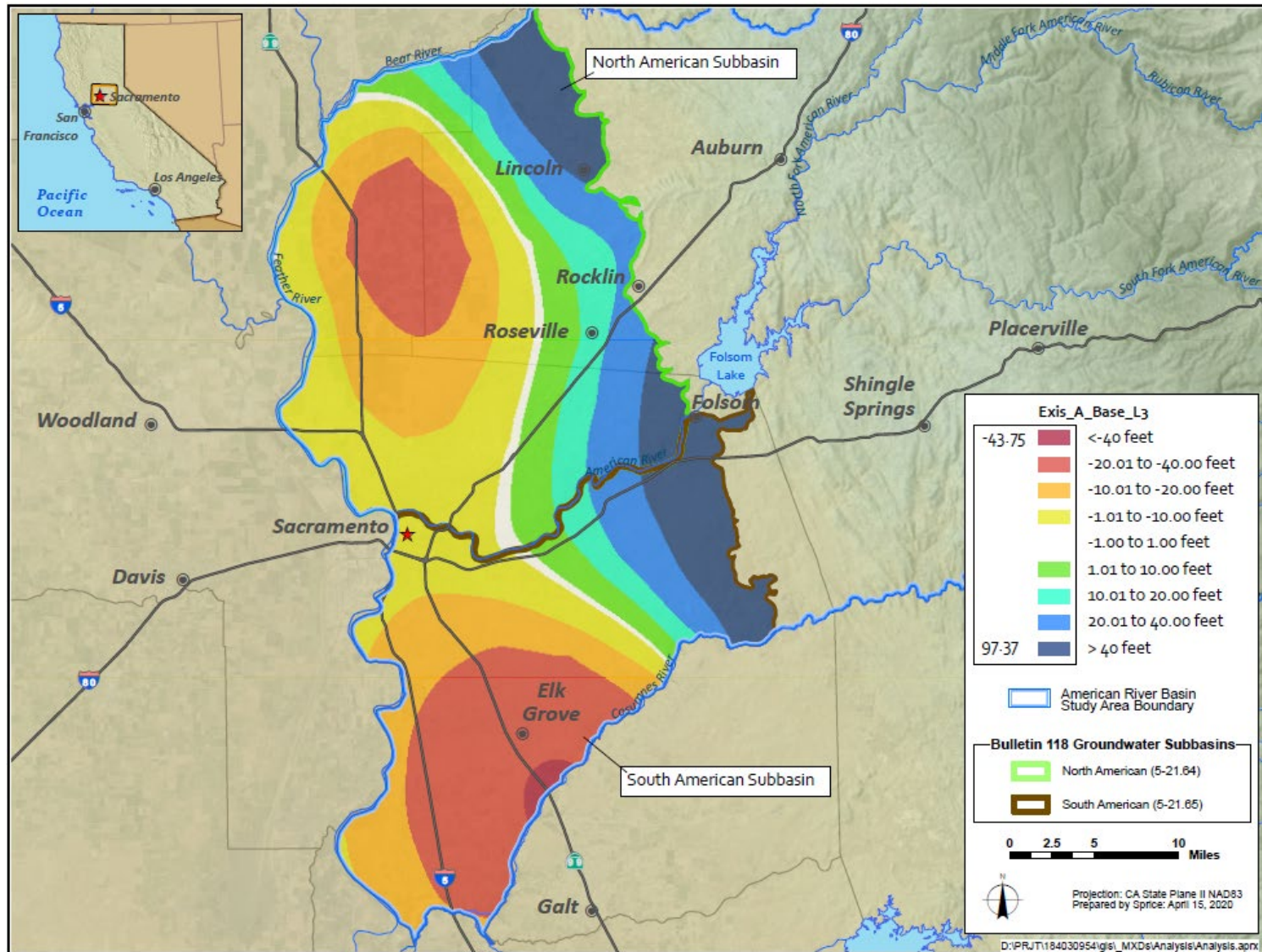


Figure G-10. Groundwater Elevation Contour Map of Existing Conditions, +2015 Level of Development Under 1922 to 2015 Hydrology (Deep Groundwater Aquifer)

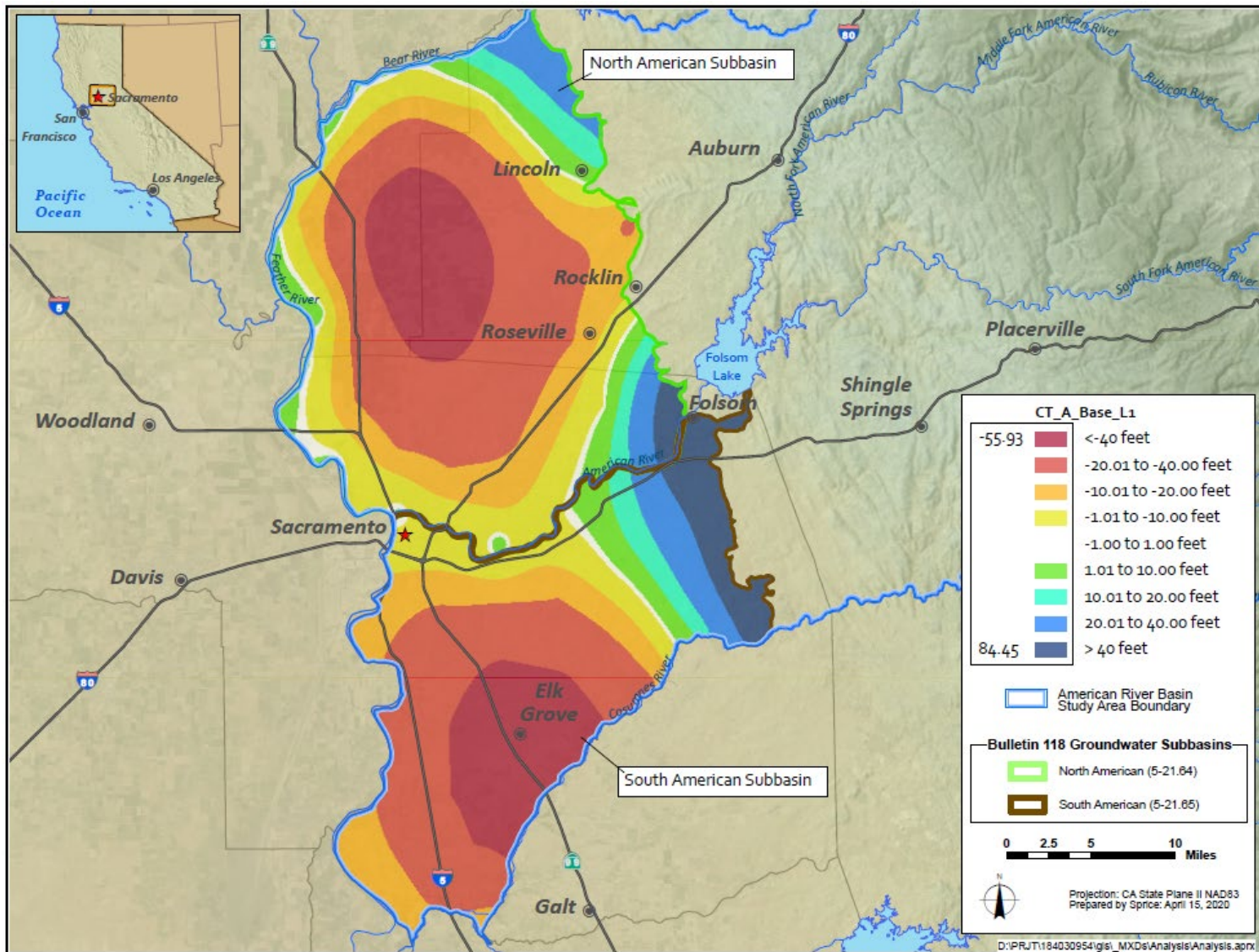


Figure G-11. Groundwater Elevation Contour Map of Future Baseline, 2070 Level of Development under 2070 Central Tendency Climate Scenario (Shallow Groundwater Aquifer)

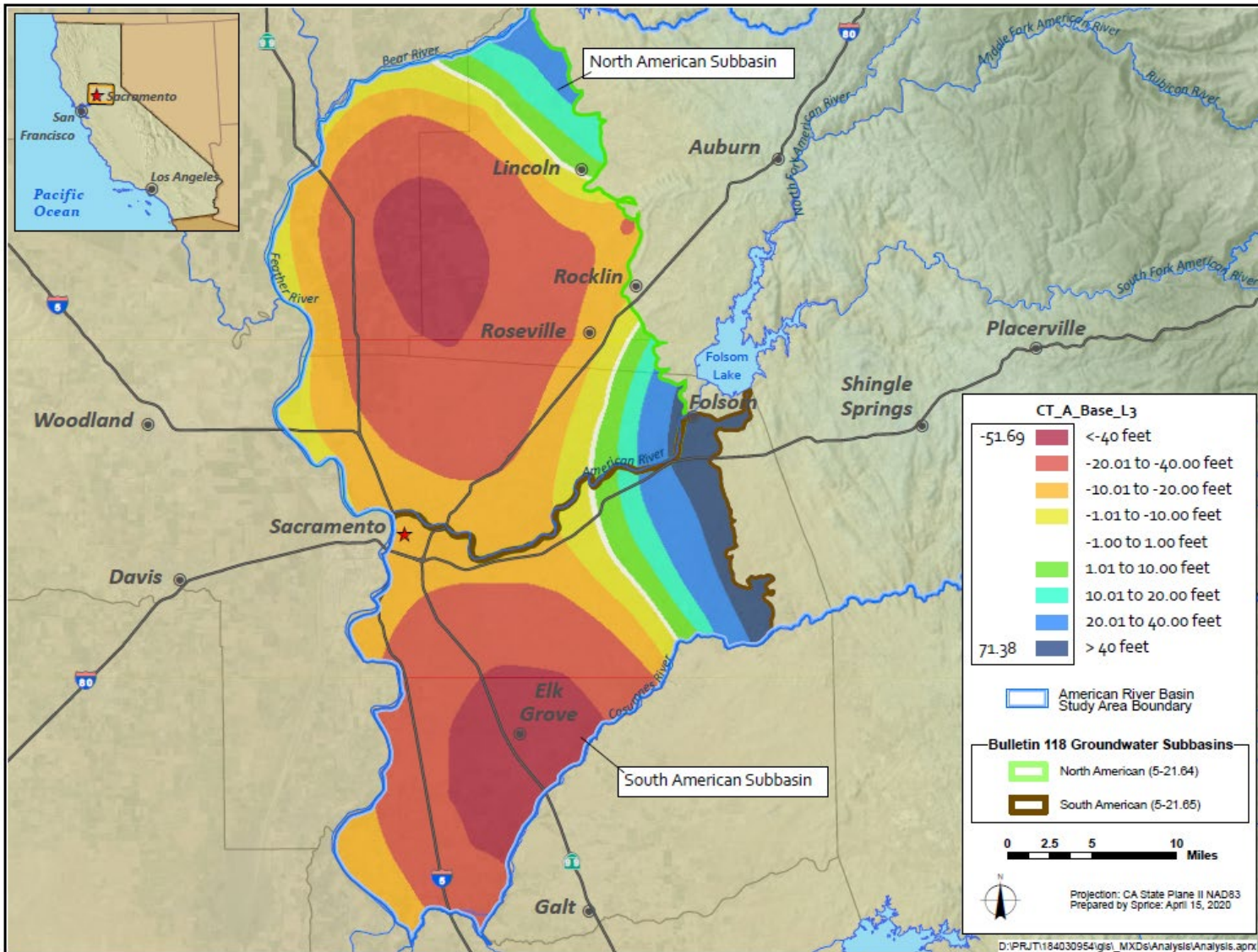


Figure G-12. Groundwater Elevation Contour Map of Future Baseline, 2070 Level of Development under 2070 Central Tendency Climate Scenario (Deep Groundwater Aquifer)

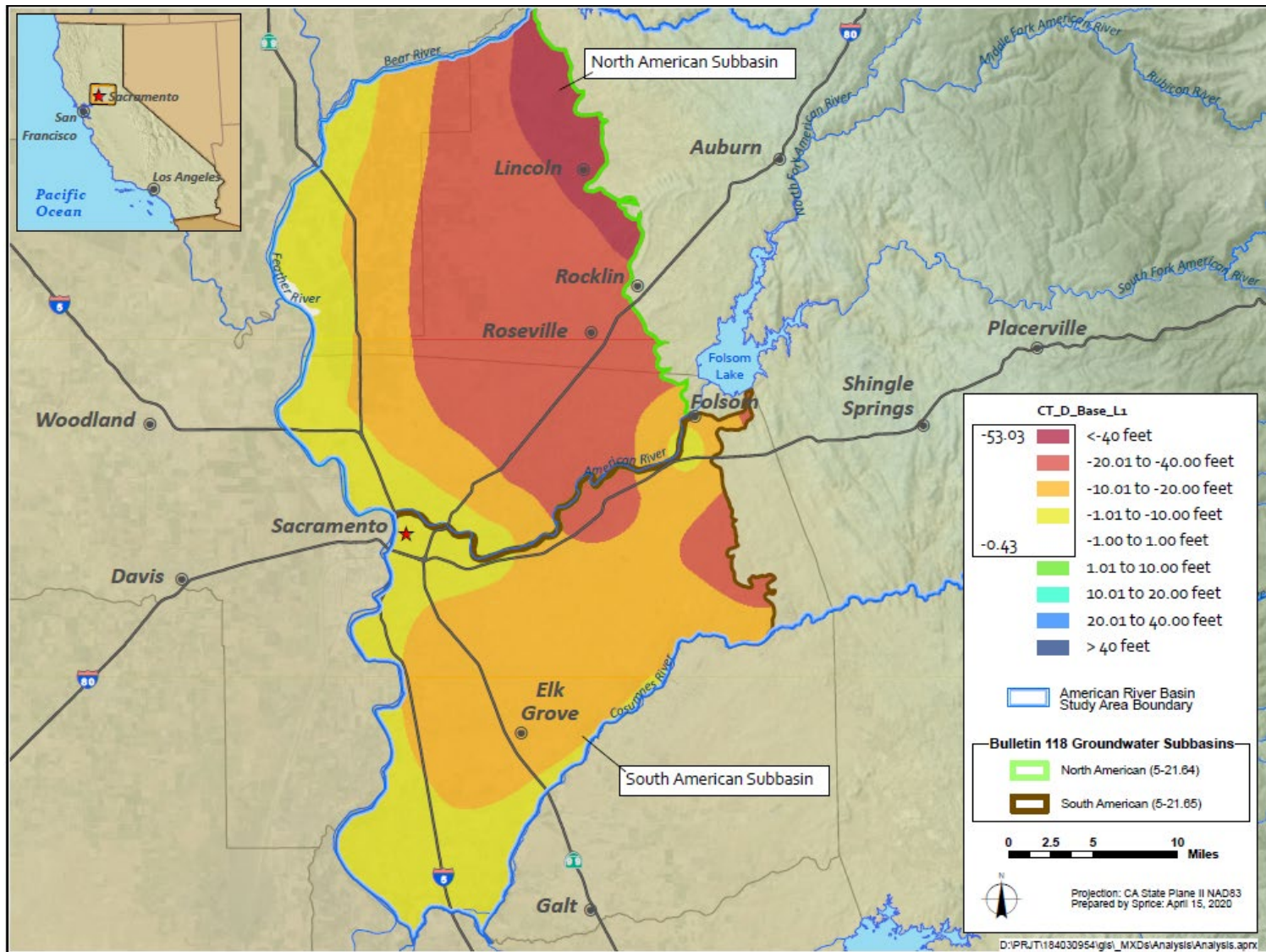


Figure G-13. Groundwater Elevation Difference Contour Map of Future Baseline under 2070 Central Tendancy Climate Scenario Relative to the Existing Conditions (Shallow Groundwater Aquifer)

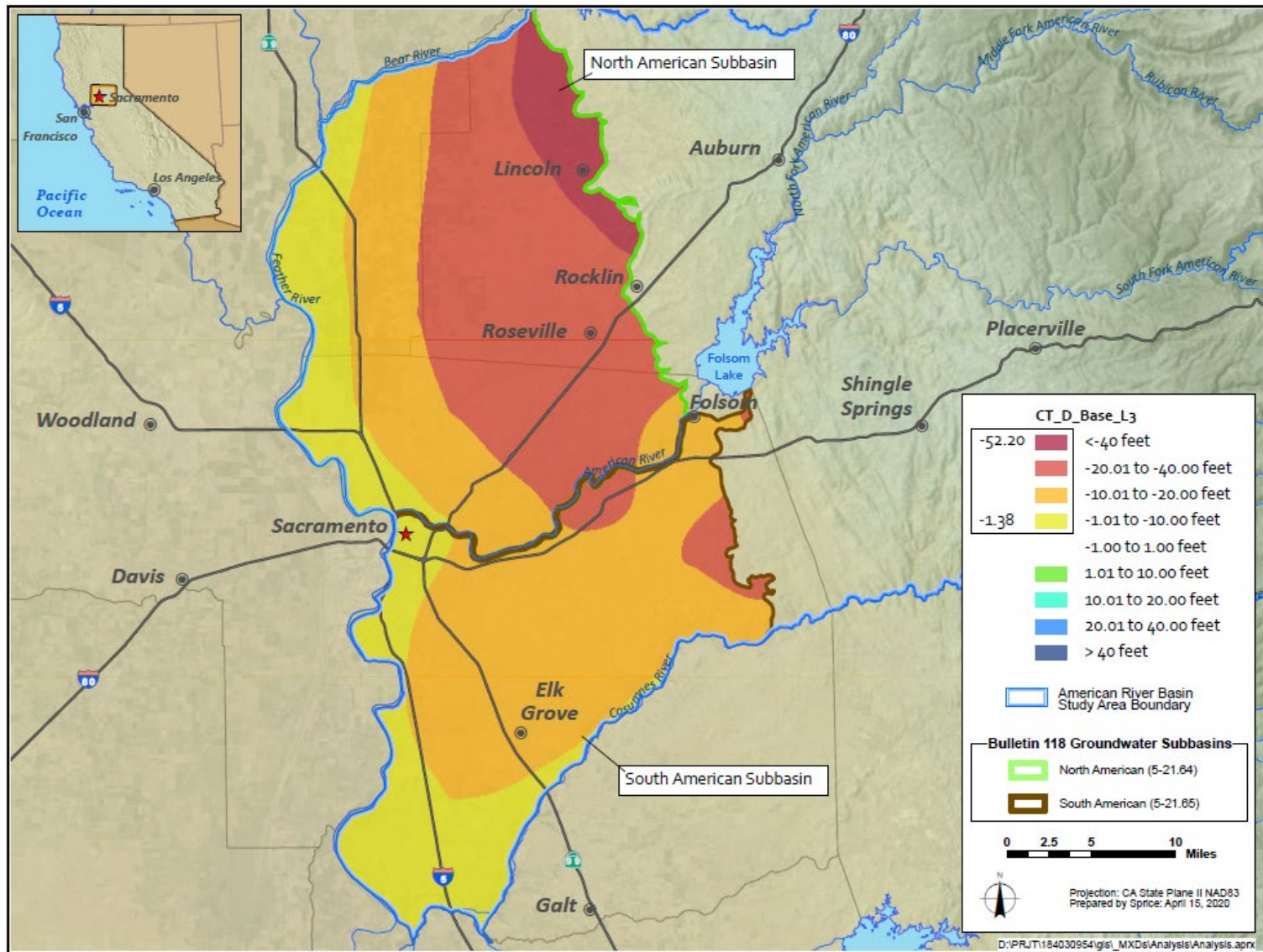


Figure G-14. Groundwater Elevation Difference Contour Map of Future Baseline under 2070 Central Tendency Climate Scenario Relative to the Existing Conditions (Deep Groundwater Aquifer)

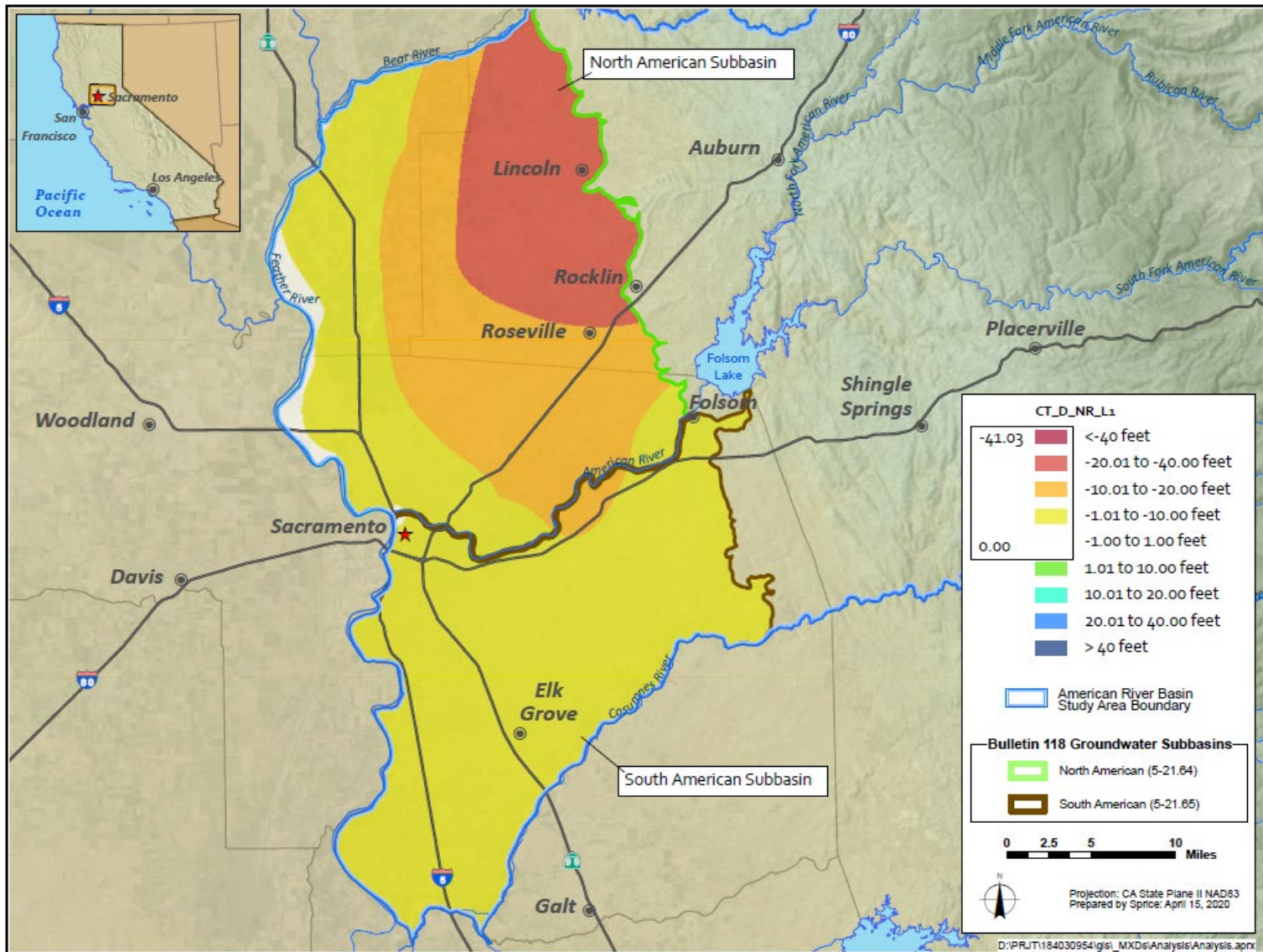


Figure G-15. Groundwater Elevation Difference Contour Map of the Importance of No Assurances for Long-term CVP Water Contract Portfolio Relative to the Future Baseline under 2070 Central Tendency Climate Scenario (Shallow Groundwater Aquifer)

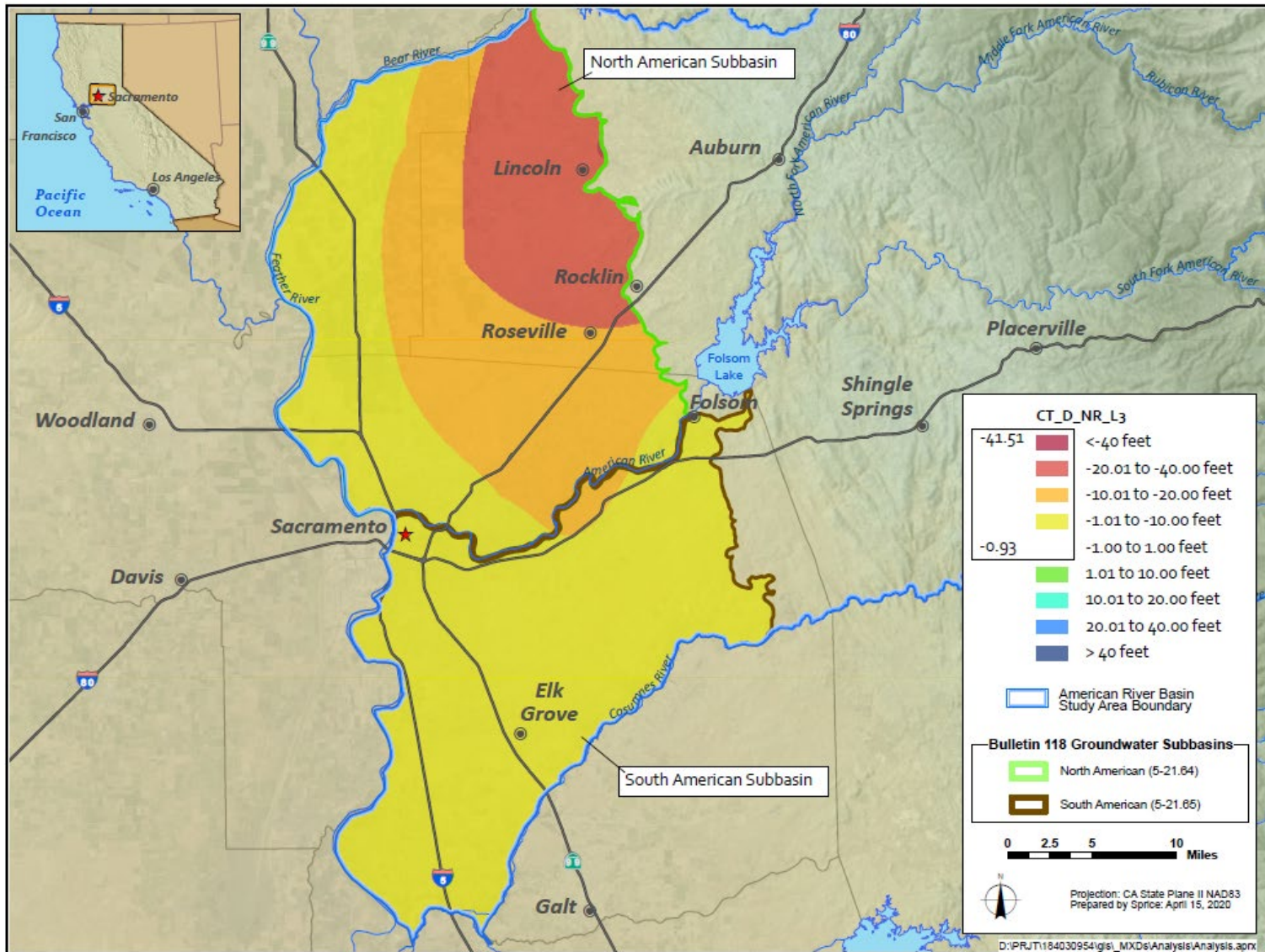


Figure G-16. Groundwater Elevation Difference Contour Map of the **No Assurances for Importance of** Long-term CVP Water Contract Portfolio Relative to the Future Baseline under 2070 Central Tendency Climate Scenario (Deep Groundwater Aquifer)

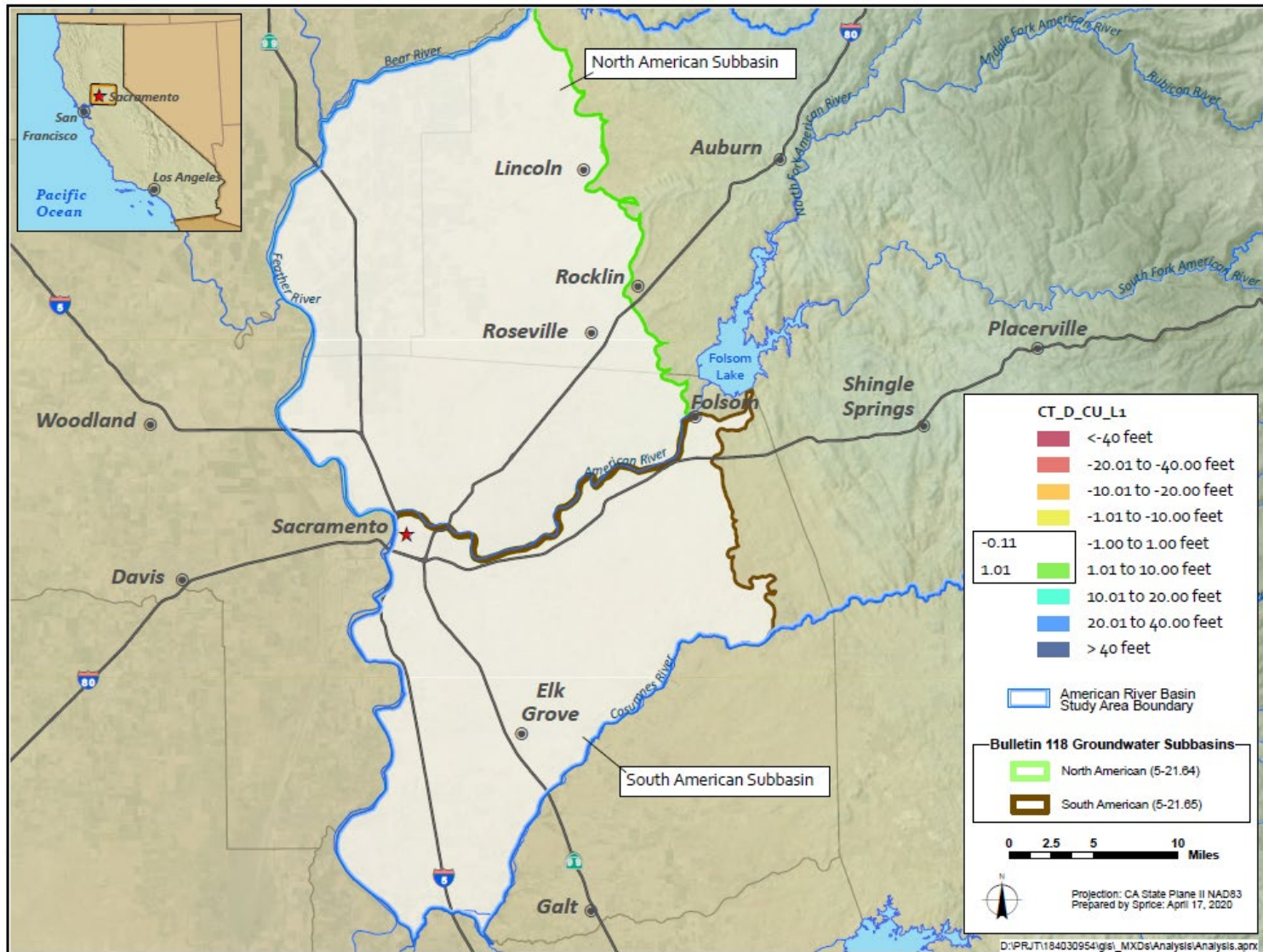


Figure G-17. Groundwater Elevation Difference Contour Map of the Federally-Recognized Groundwater Bank Portfolio Relative to the Future Baseline under 2070 Central Tendency Climate Scenario (Shallow Groundwater Aquifer)

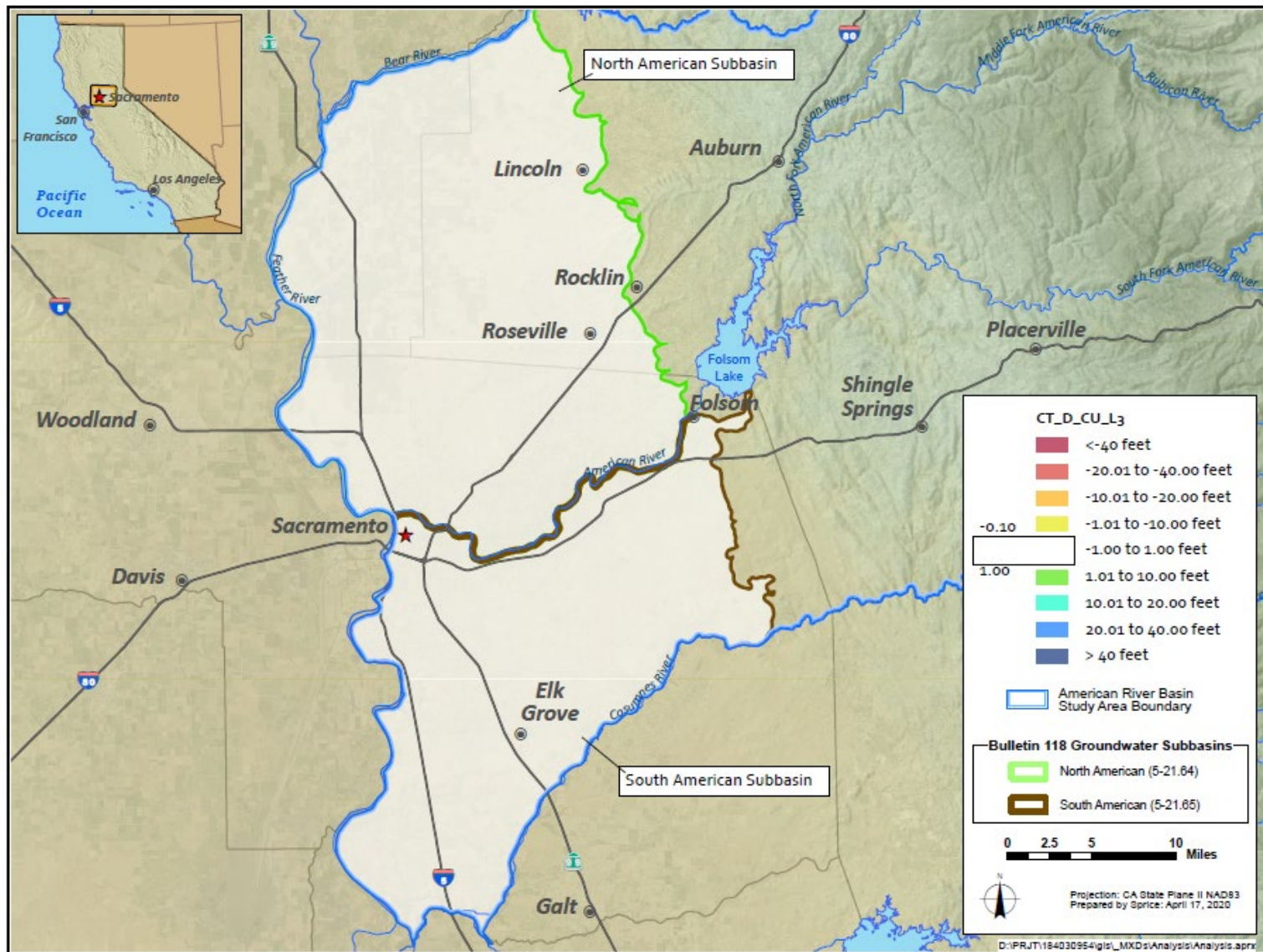


Figure G-18. Groundwater Elevation Difference Contour Map of the Federally-Recognized Groundwater Bank Portfolio Relative to the Future Baseline under 2070 Central Tendency Climate Scenario (Deep Groundwater Aquifer)

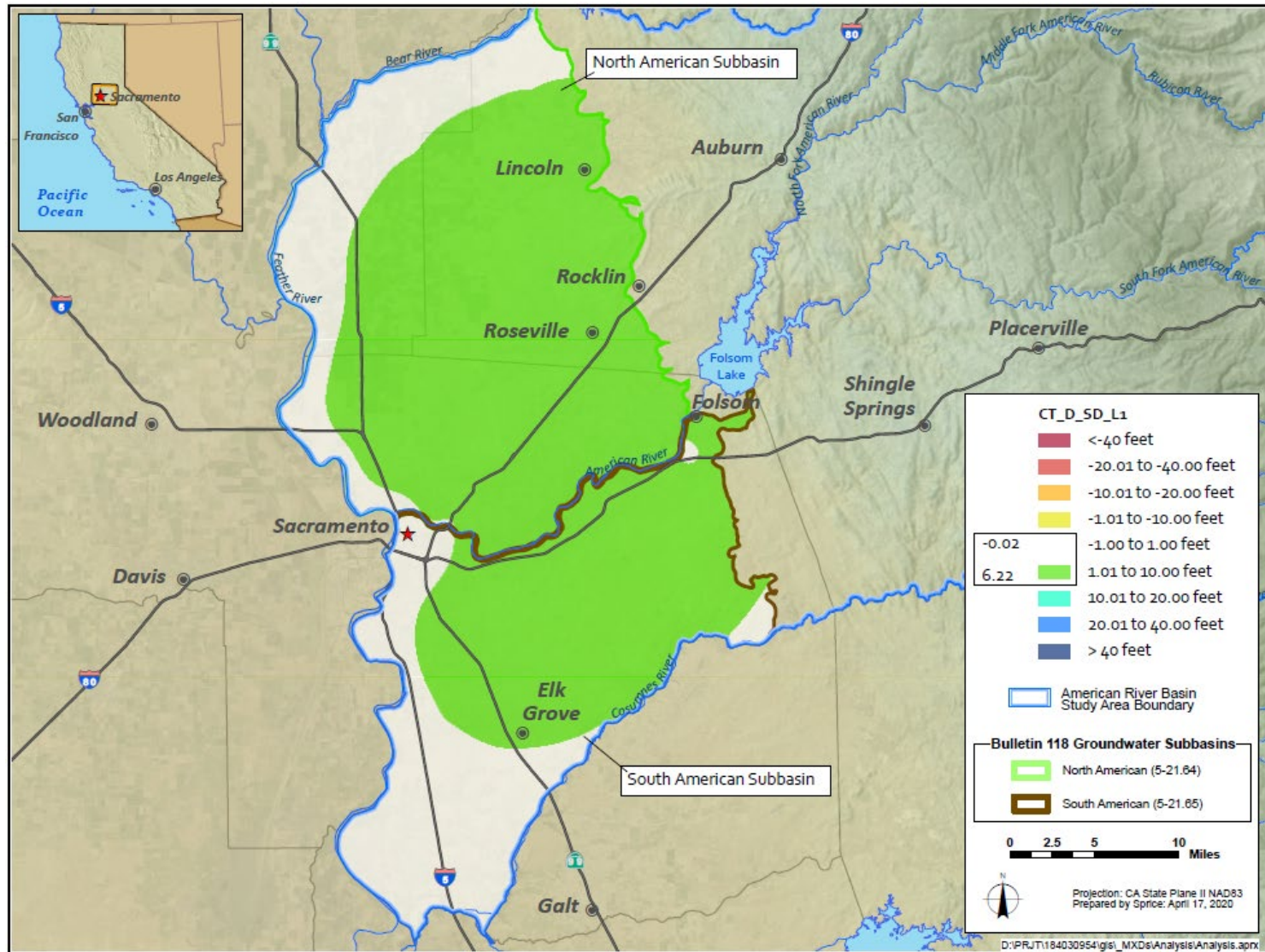


Figure G-19. Groundwater Elevation Difference Contour Map of the Sacramento River Diversion Project Portfolio Relative to the Future Baseline under 2070 Central Tendancy Climate Scenario (Shallow Groundwater Aquifer)

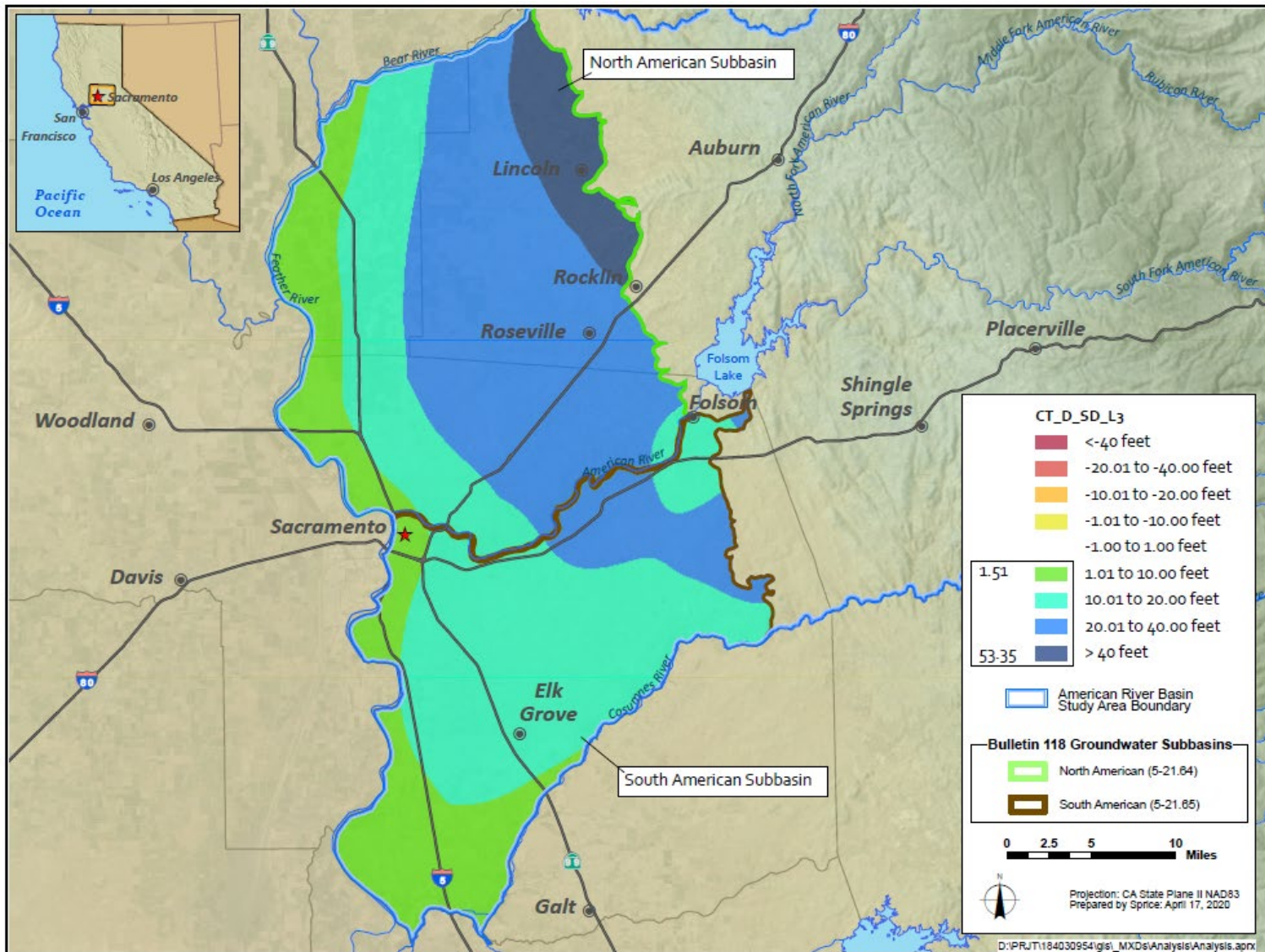


Figure G-20. Groundwater Elevation Difference Contour Map of the Sacramento River Diversion Project Portfolio Relative to the Future Baseline under 2070 Central Tendency Climate Scenario (Deep Groundwater Aquifer)

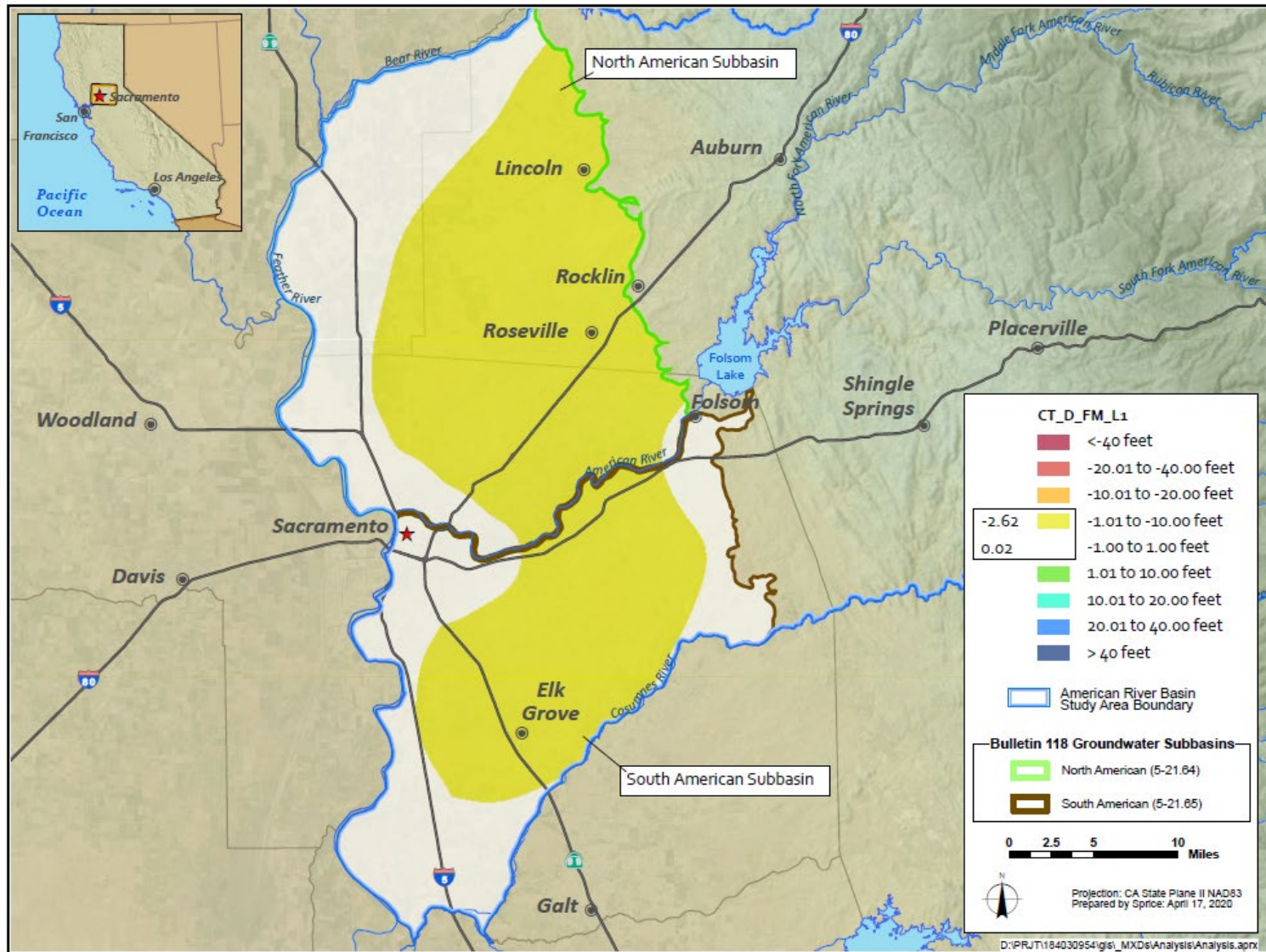


Figure G-21. Groundwater Elevation Difference Contour Map of the Modified Flow Management Standard Portfolio Relative to the Future Baseline under 2070 Central Tendency Climate Scenario (Shallow Groundwater Aquifer)

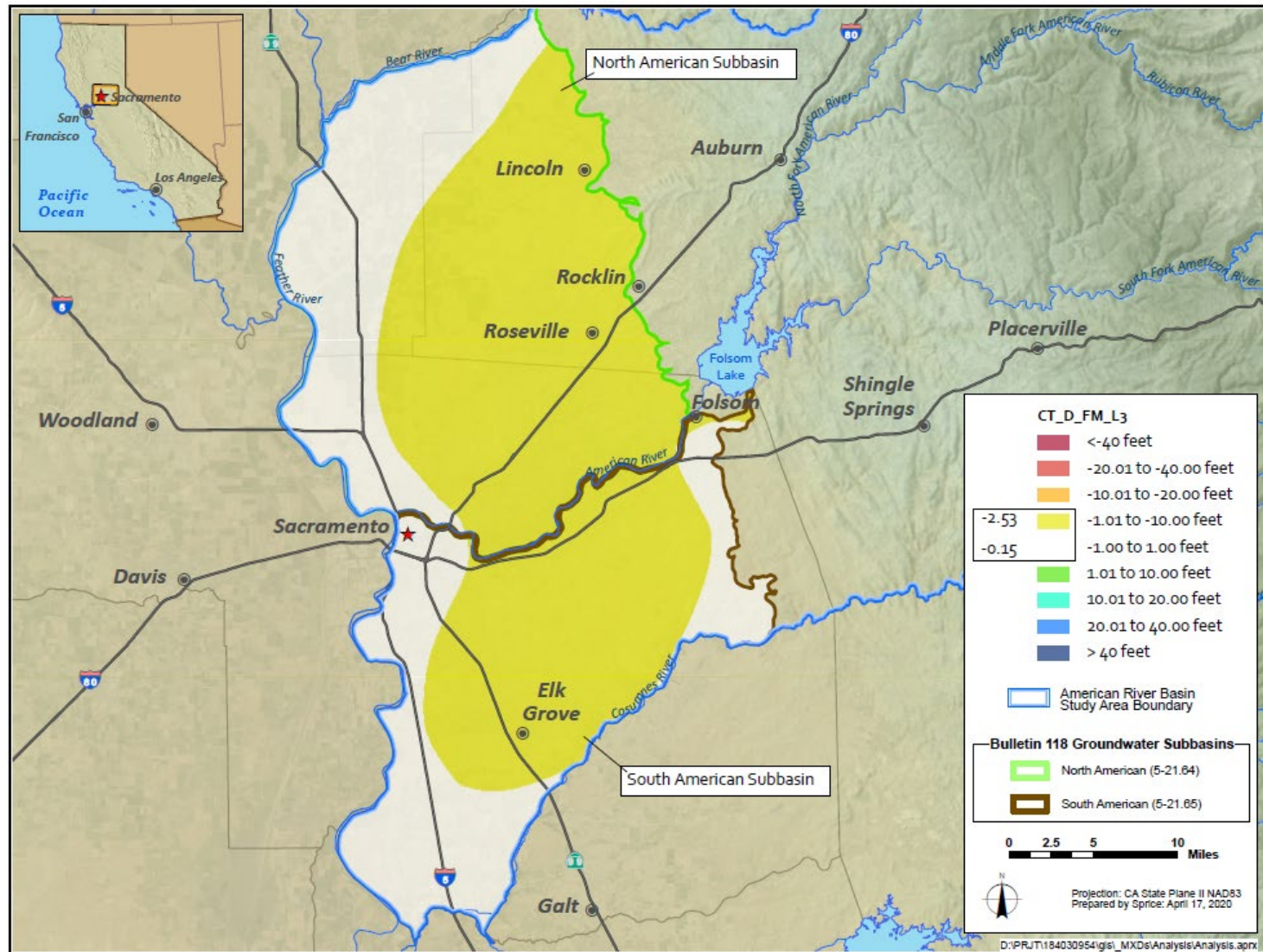


Figure G-22. Groundwater Elevation Difference Contour Map of the Modified Flow Management Standard Portfolio Relative to the Future Baseline under 2070 Central Tendency Climate Scenario (Deep Groundwater Aquifer)

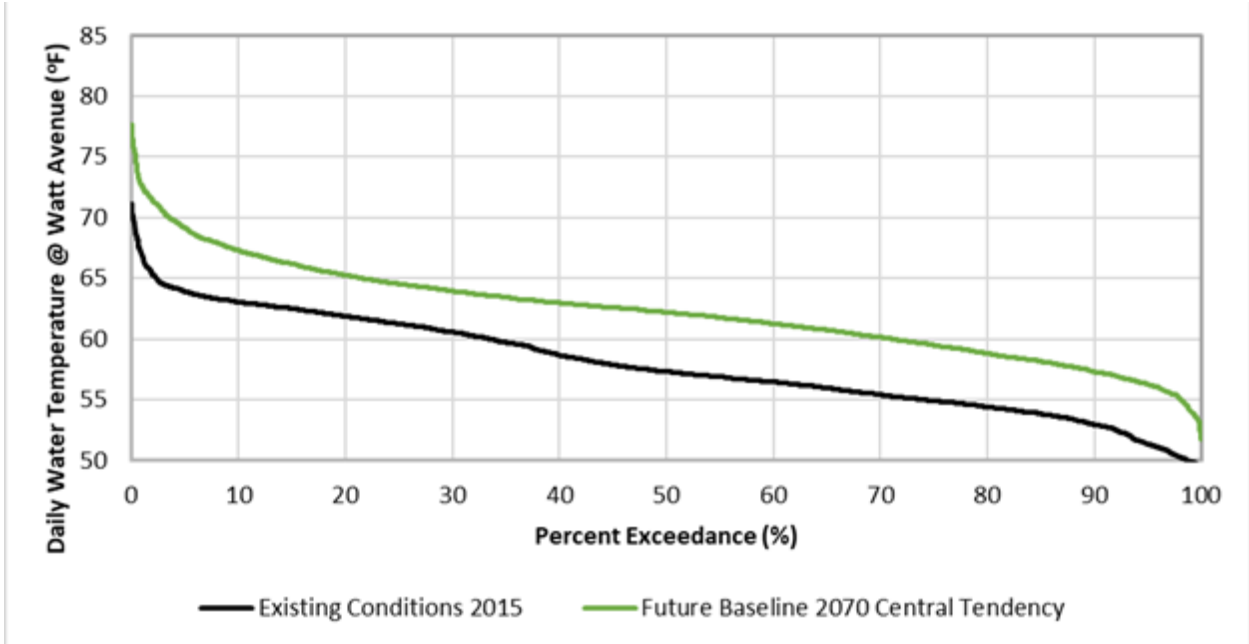


Figure G-23. Lower American River at Watt Avenue May Exceedance Plots of Daily Average Temperature for Existing Conditions (2015) and Future Baseline (2070 Central Tendency) scenarios

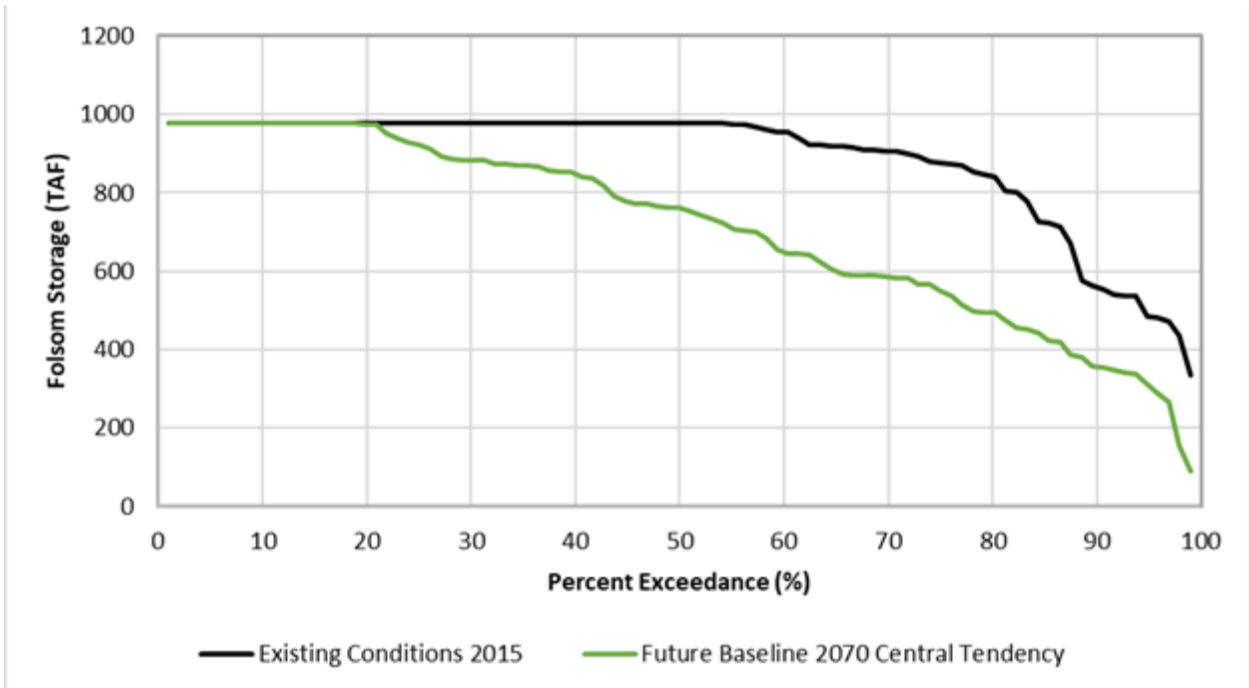


Figure G-24. Folsom Reservoir May Storage Exceedance Plots for Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

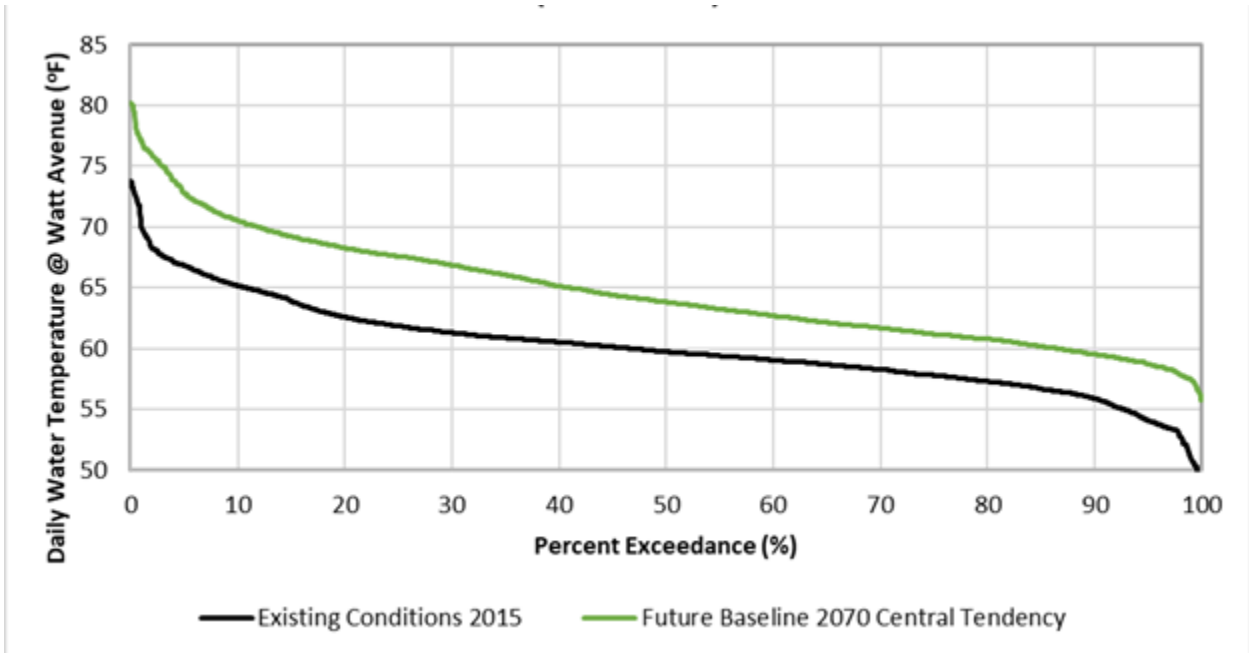


Figure G-25. Lower American River at Watt Avenue June Exceedance Plots of Daily Average Temperature for Existing Conditions (2015) and Future Baseline (2070 Central Tendency) scenarios

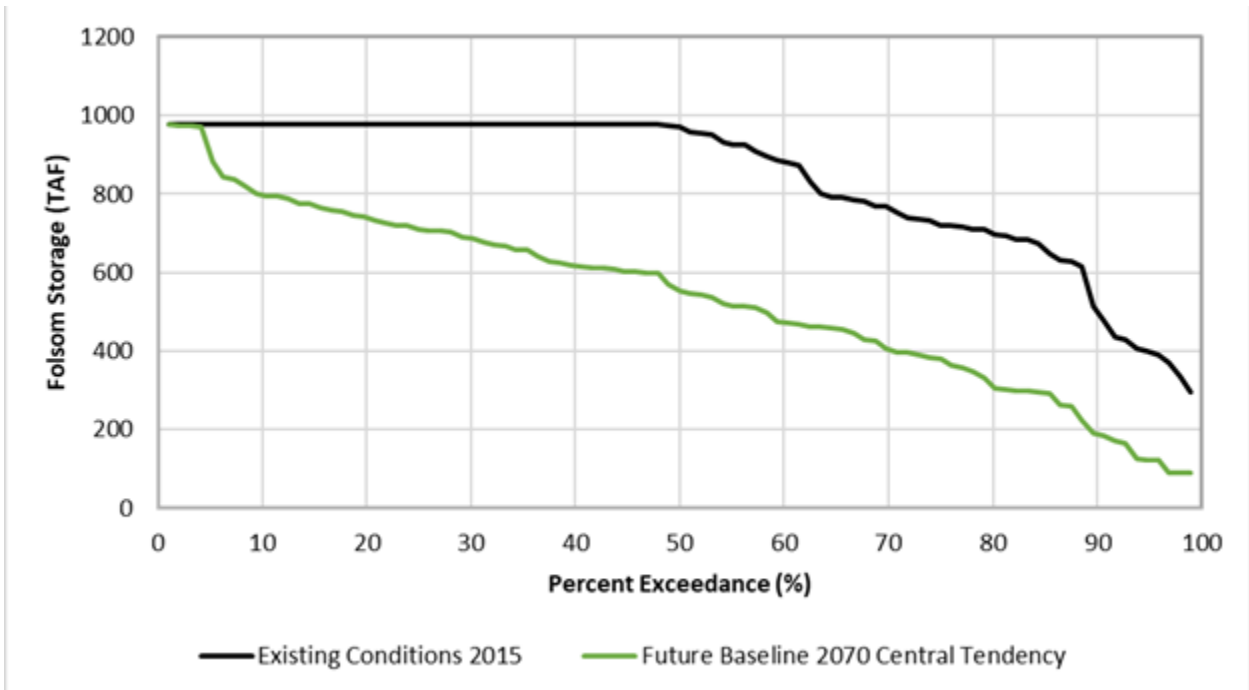


Figure G-26. Folsom Reservoir June Storage Exceedance Plots for Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

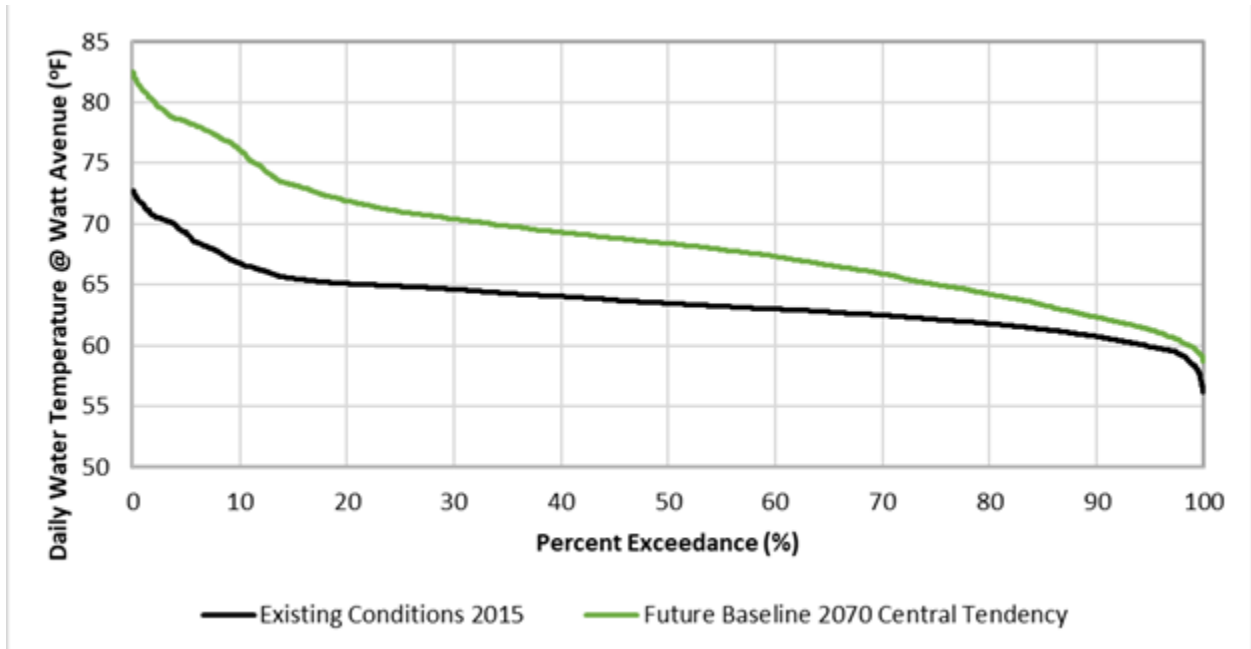


Figure G-27. Lower American River at Watt Avenue July Exceedance Plots of Daily Average Temperature for Existing Conditions (2015) and Future Baseline (2070 Central Tendency) scenarios

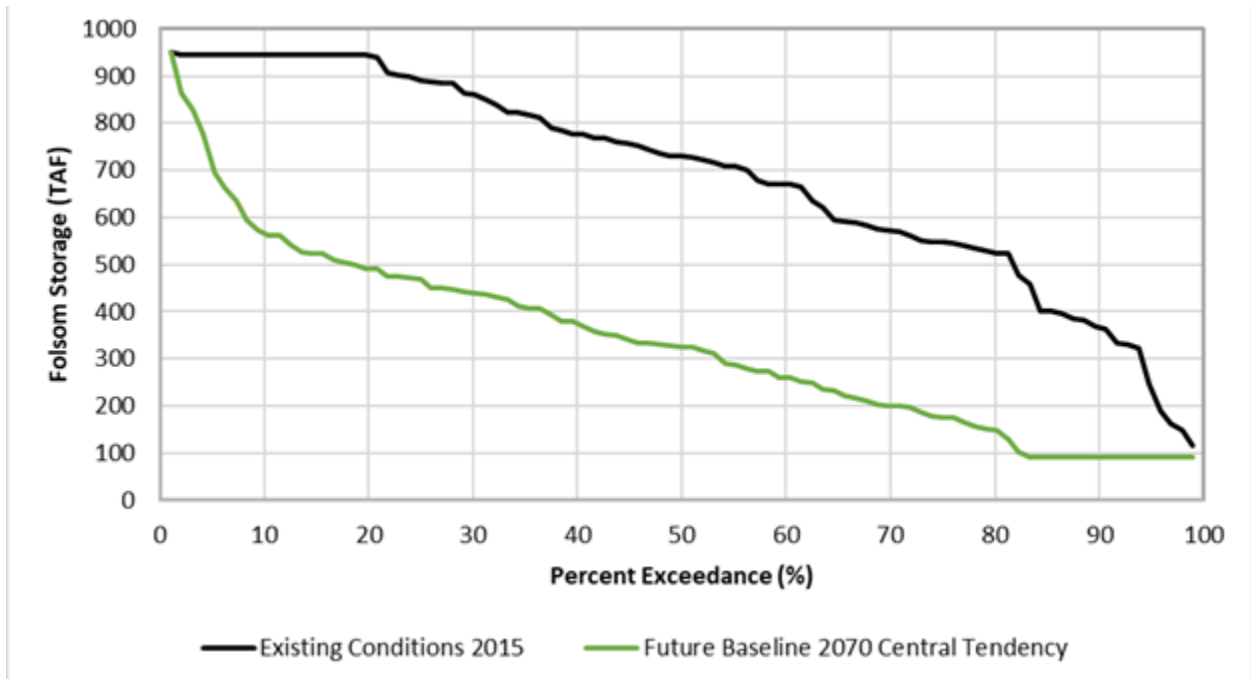


Figure G-28. Folsom Reservoir July Storage Exceedance Plots for Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

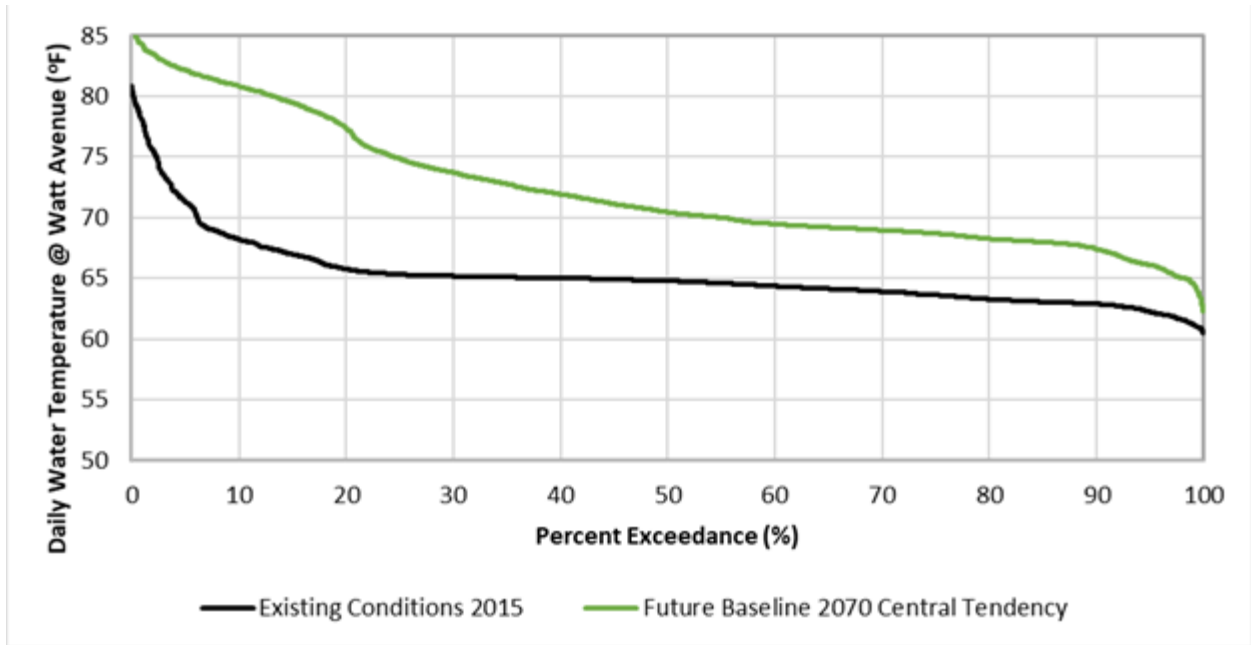


Figure G-29. Lower American River at Watt Avenue August Exceedance Plots of Daily Average Temperature for Existing Conditions (2015) and Future Baseline (2070 Central Tendency) scenarios

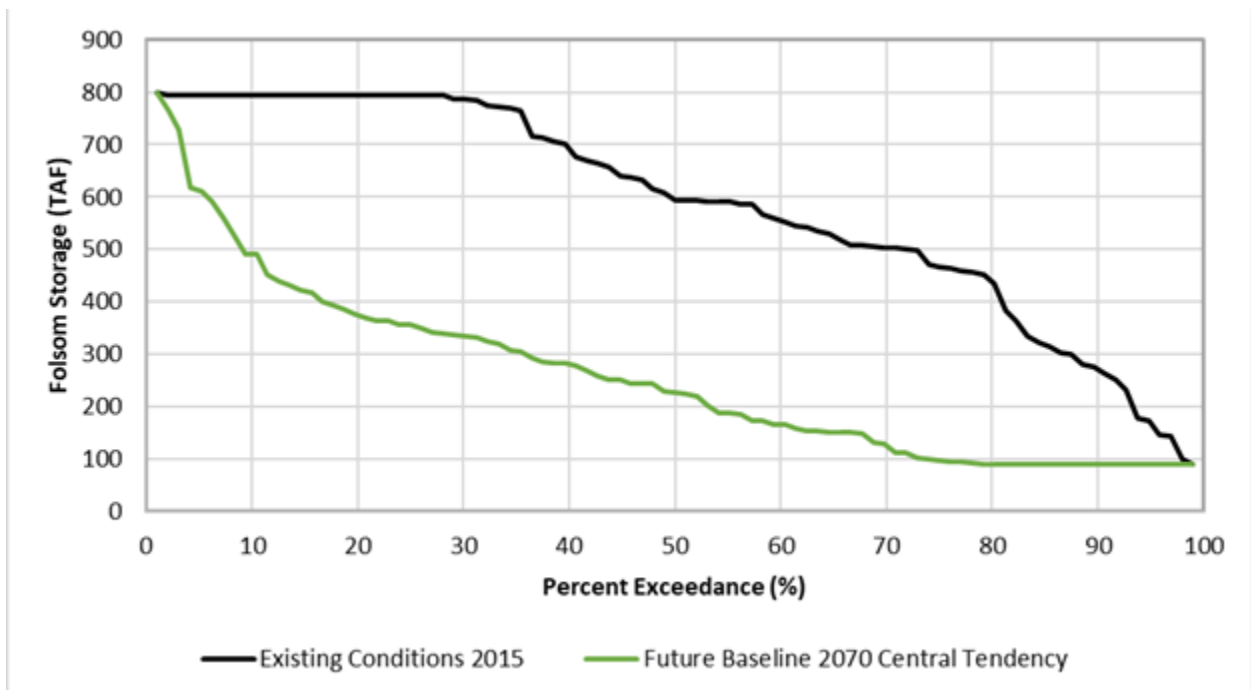


Figure G-30. Folsom Reservoir August Storage Exceedance Plots for Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

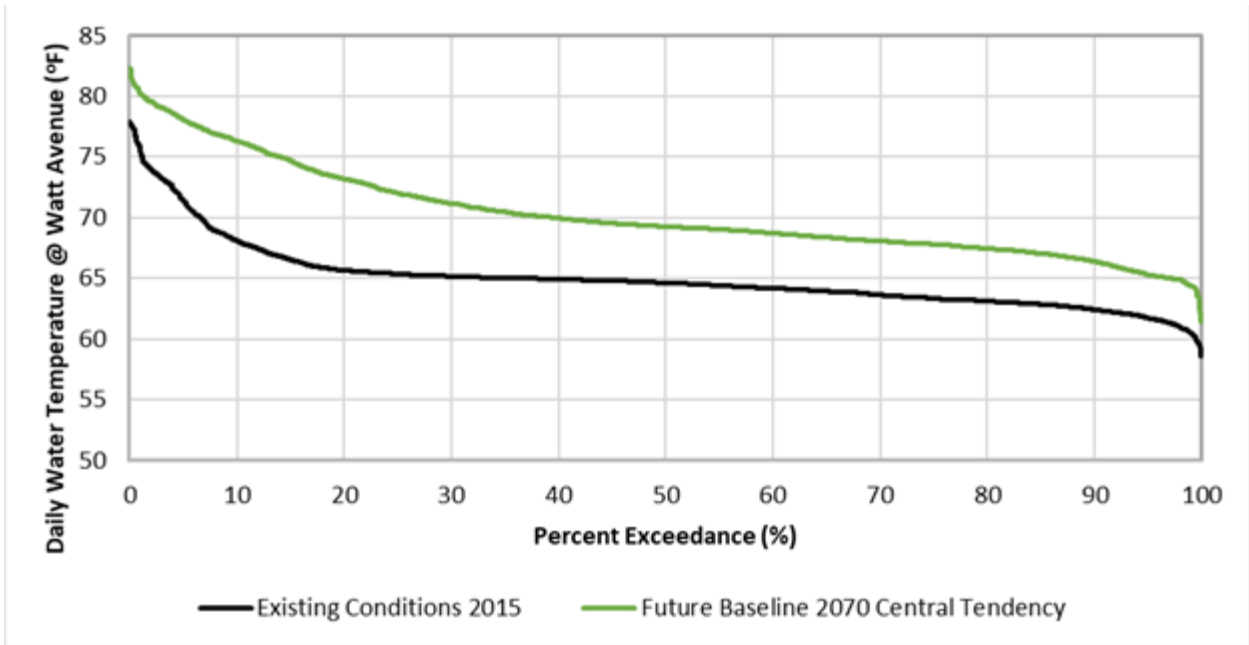


Figure G-31. Lower American River at Watt Avenue September Exceedance Plots of Daily Average Temperature for Existing Conditions (2015) and Future Baseline (2070 Central Tendency) scenarios

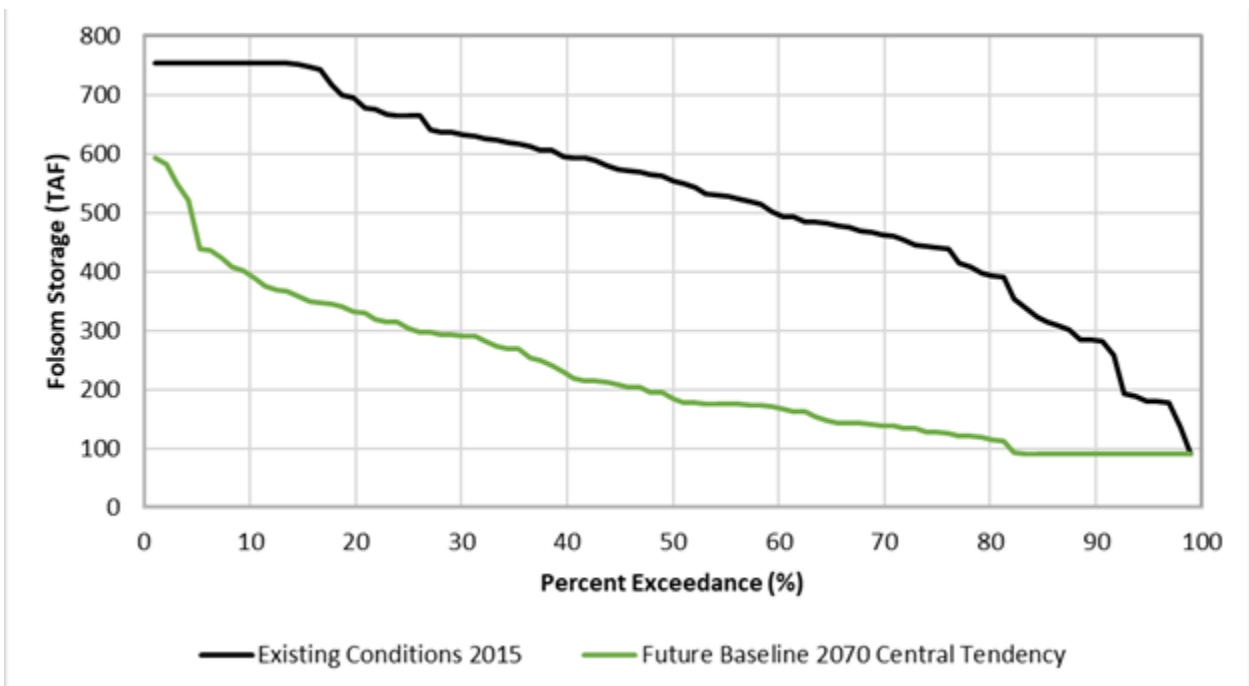


Figure G-32. Folsom Reservoir September Storage Exceedance Plots for Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

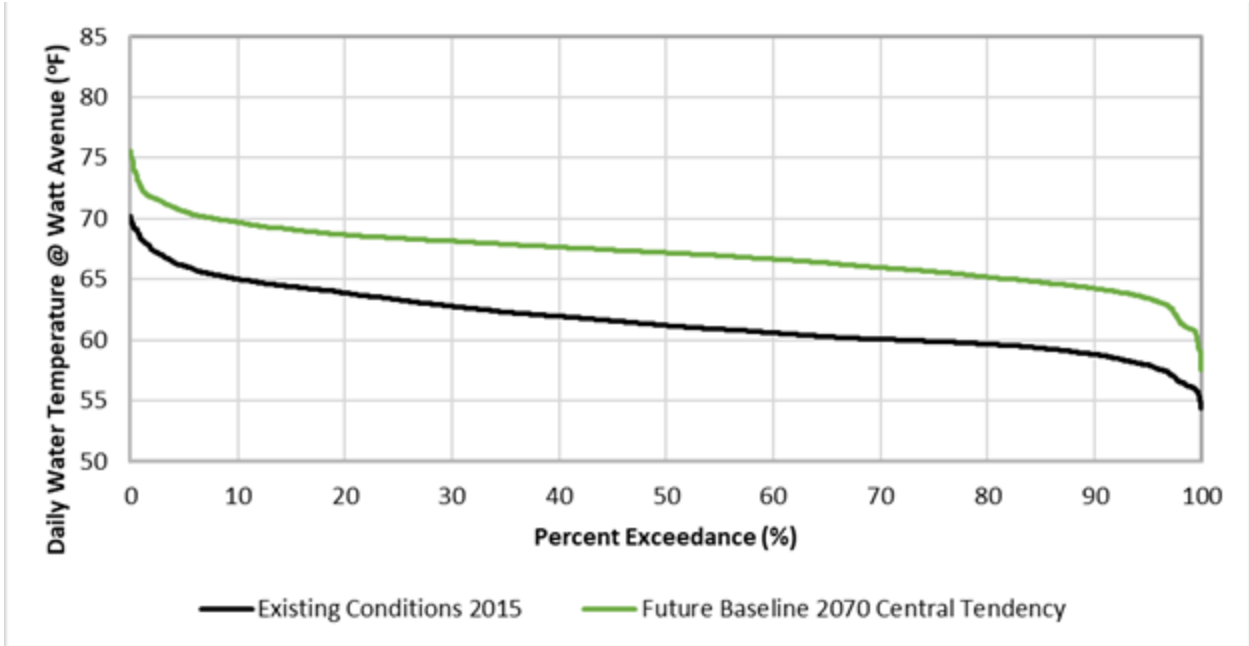


Figure G-33. Lower American River at Watt Avenue October Exceedance Plots of Daily Average Temperature for Existing Conditions (2015) and Future Baseline (2070 Central Tendency) scenarios

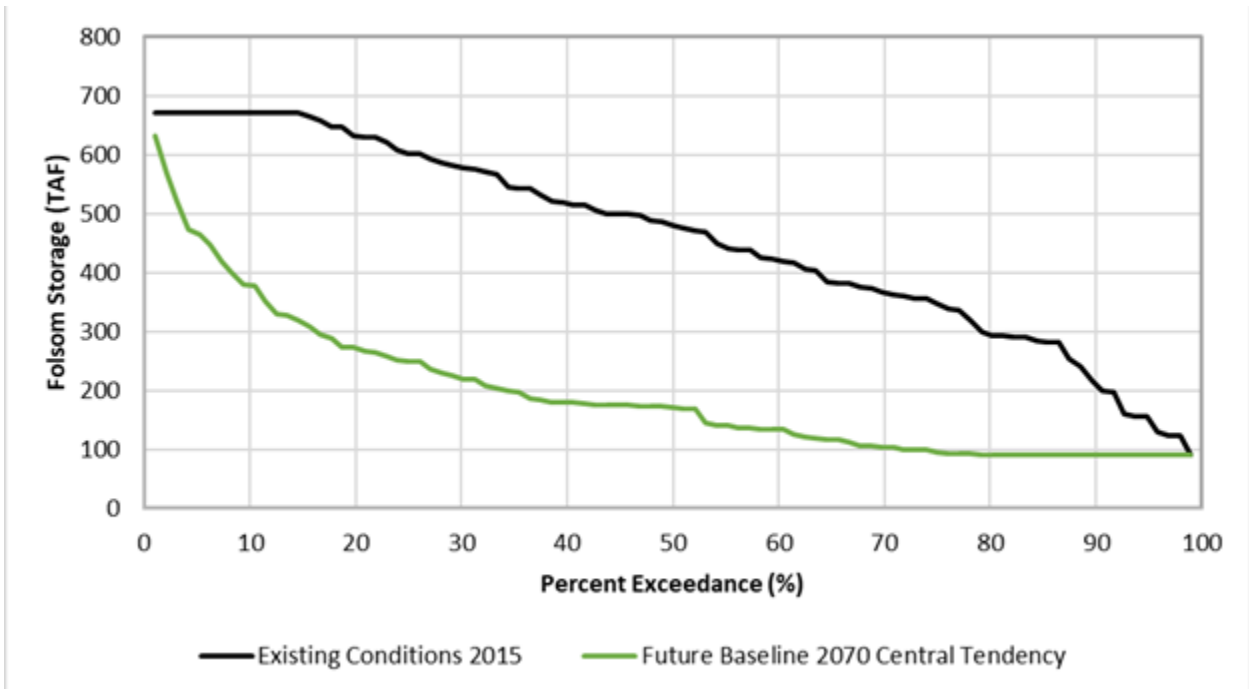


Figure G-34. Folsom Reservoir October Storage Exceedance Plots for Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

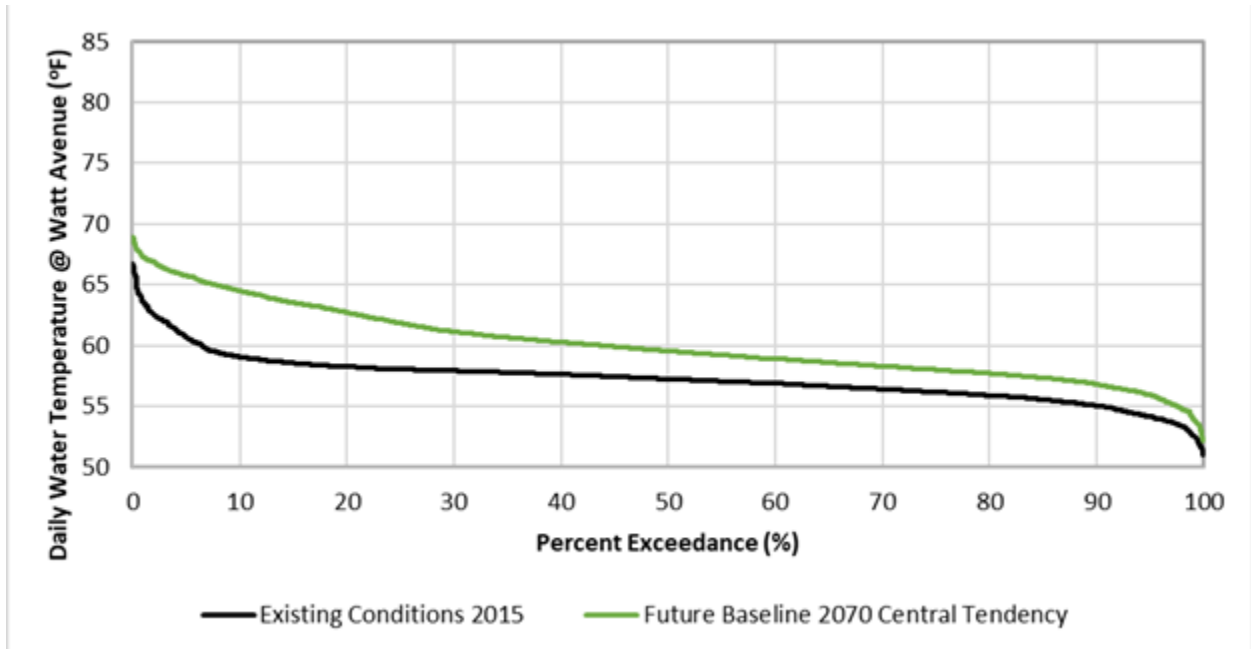


Figure G-35. Lower American River at Watt Avenue November Exceedance Plots of Daily Average Temperature for Existing Conditions (2015) and Future Baseline (2070 Central Tendency) scenarios

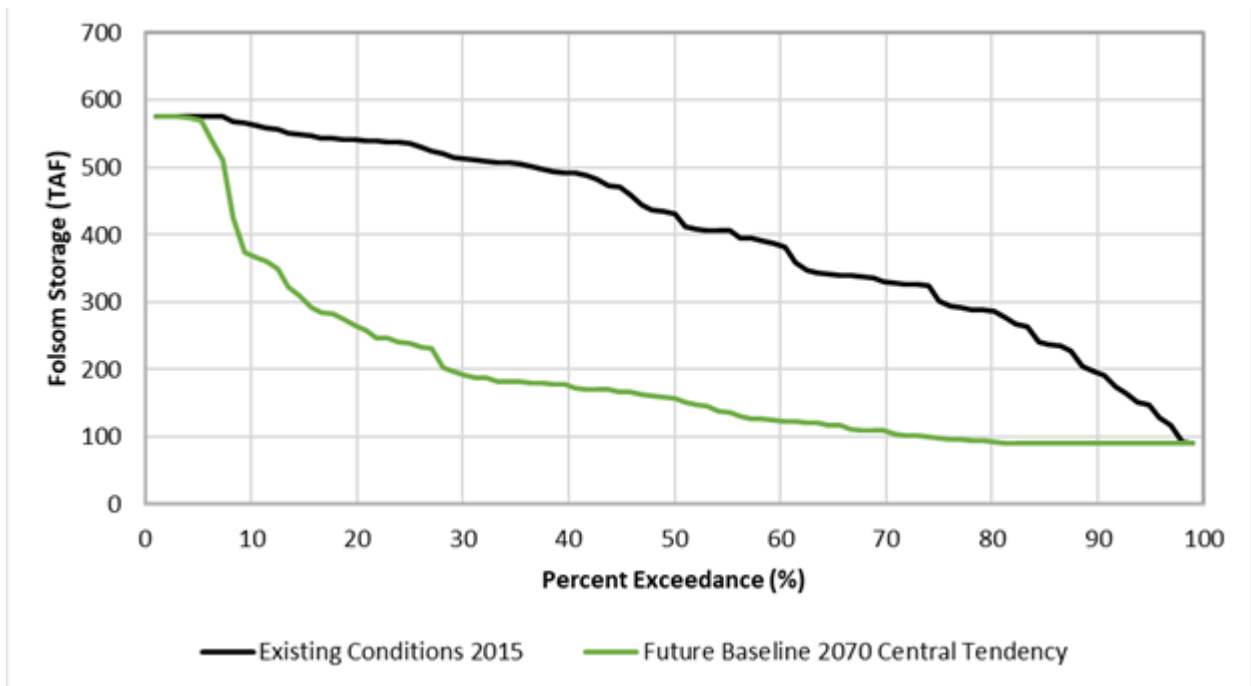


Figure G-36. Folsom Reservoir November Storage Exceedance Plots for Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

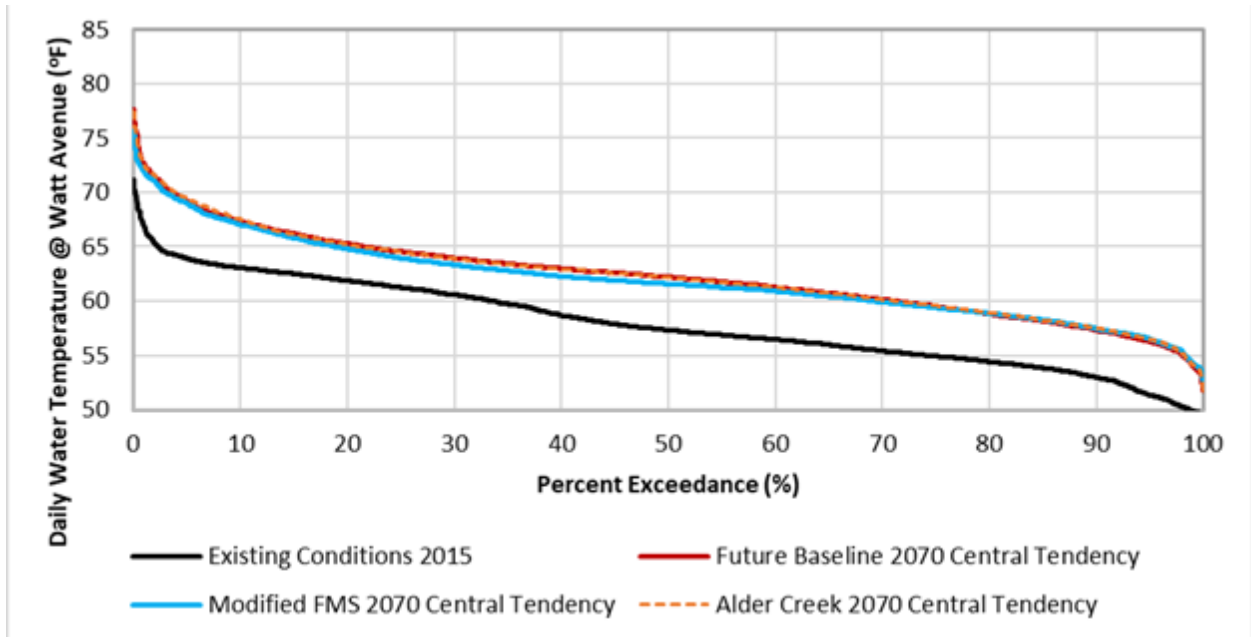


Figure G-37. Lower American River at Watt Avenue May Exceedance Plots of Daily Average Temperature for Modified Flow Management Standard and Alder Creek Storage and Conservation Project Adaptation Portfolios Compared to Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

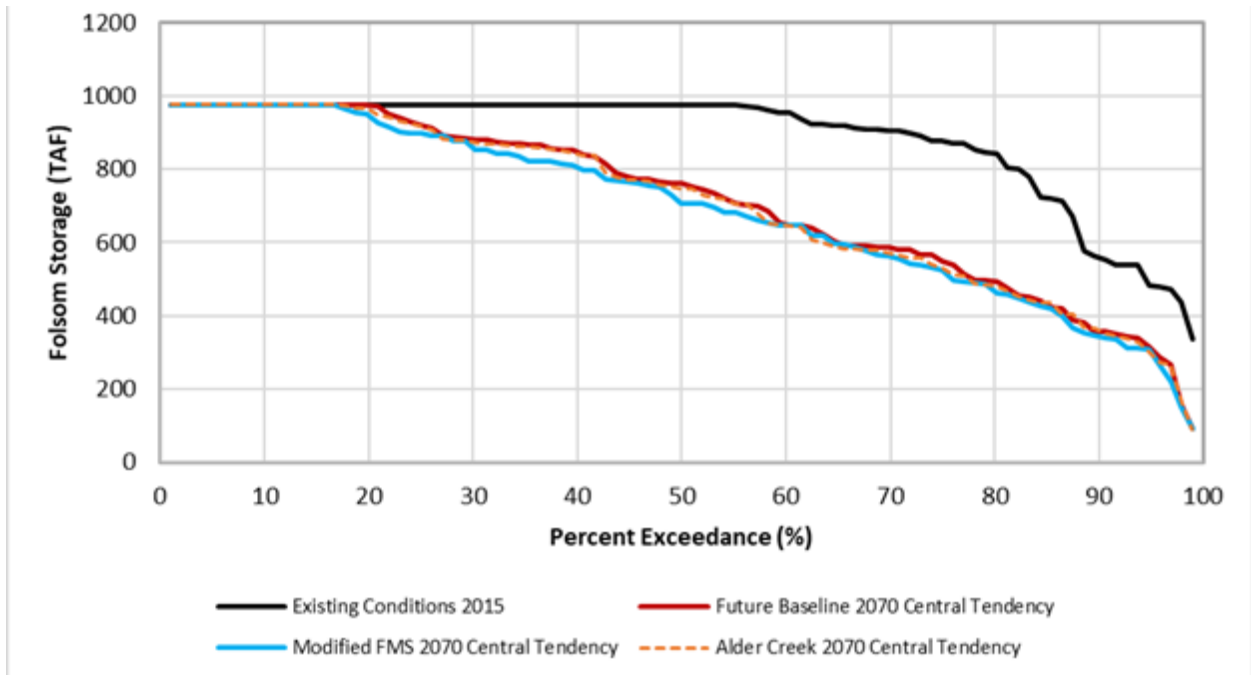


Figure G-38. Folsom Reservoir May Storage Exceedance Plots for Modified Flow Management Standard and Alder Creek Storage and Conservation Project Adaptation Portfolios Compared to Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

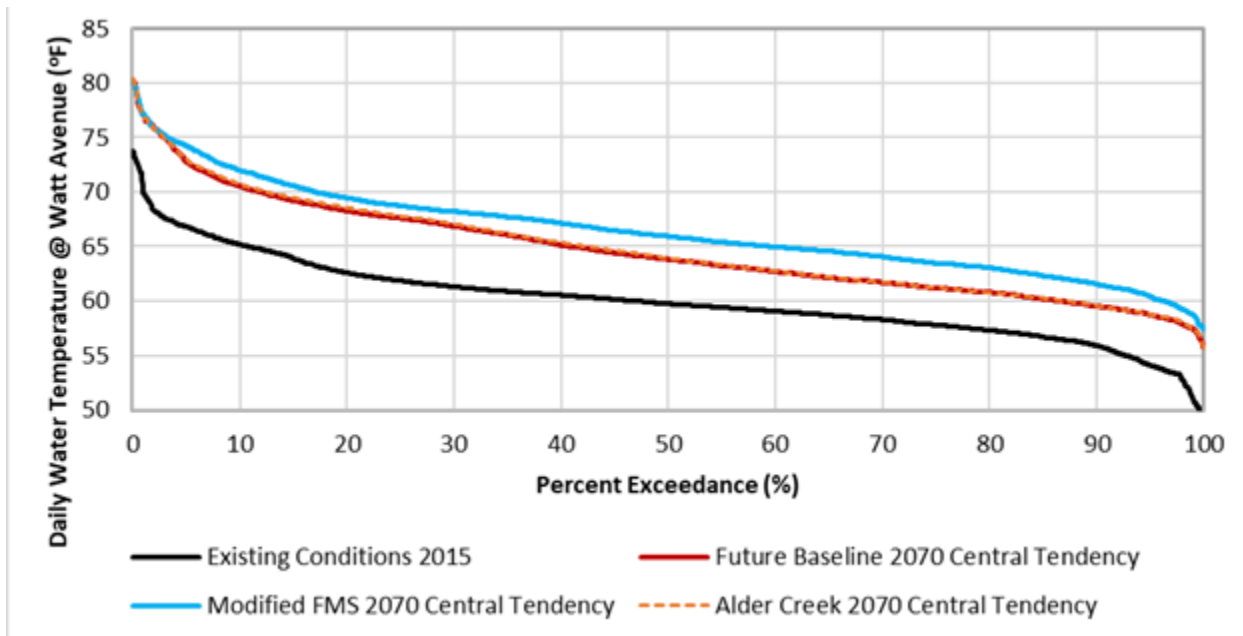


Figure G-39. Lower American River at Watt Avenue June Exceedance Plots of Daily Average Temperature for Modified Flow Management Standard and Alder Creek Storage and Conservation Project Adaptation Portfolios Compared to Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

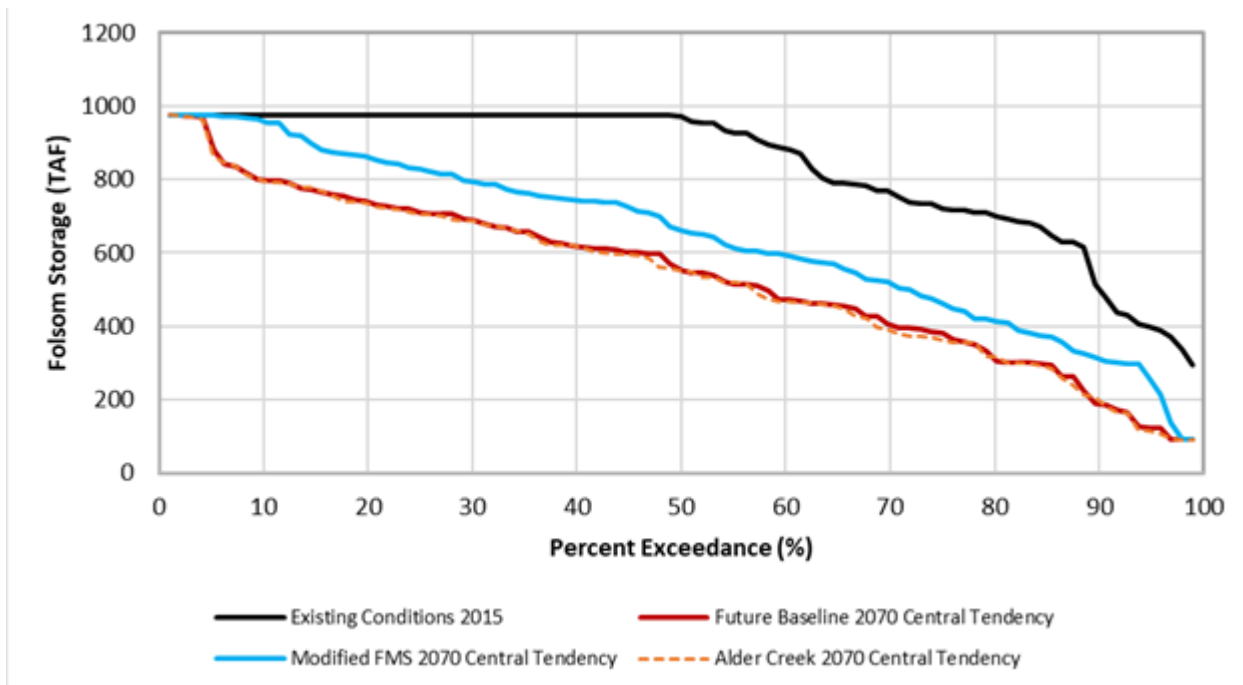


Figure G-40. Folsom Reservoir June Storage Exceedance Plots for Modified Flow Management Standard and Alder Creek Storage and Conservation Project Adaptation Portfolios Compared to Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

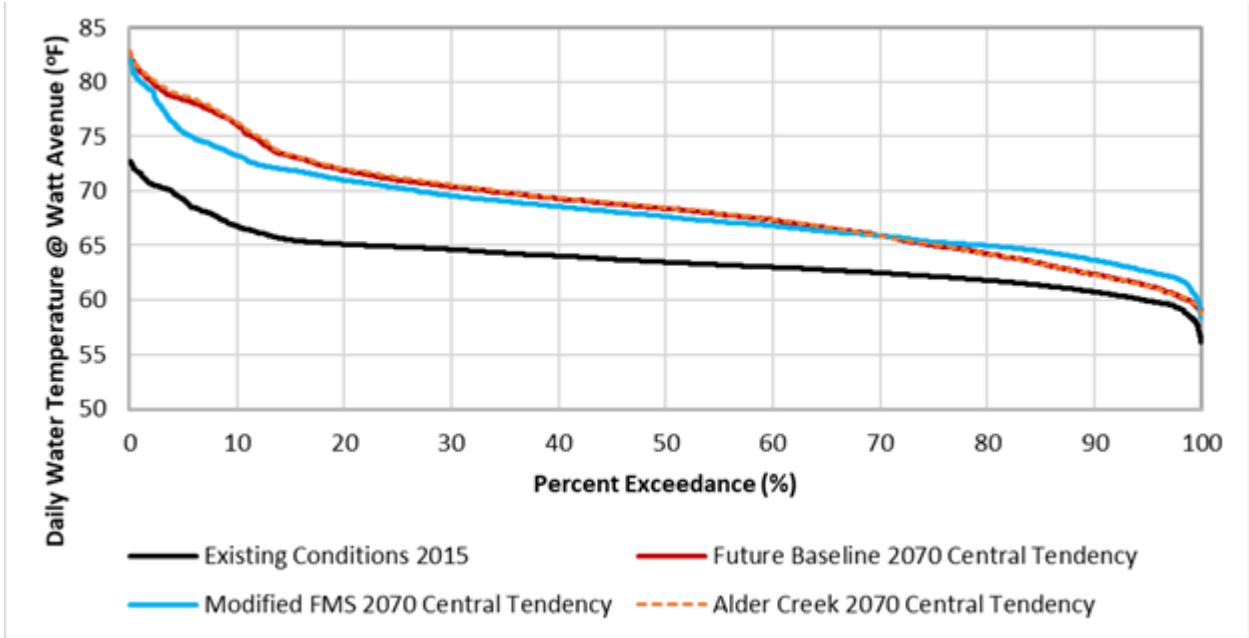


Figure G-41. Lower American River at Watt Avenue July Exceedance Plots of Daily Average Temperature for Modified Flow Management Standard and Alder Creek Storage and Conservation Project Adaptation Portfolios Compared to Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

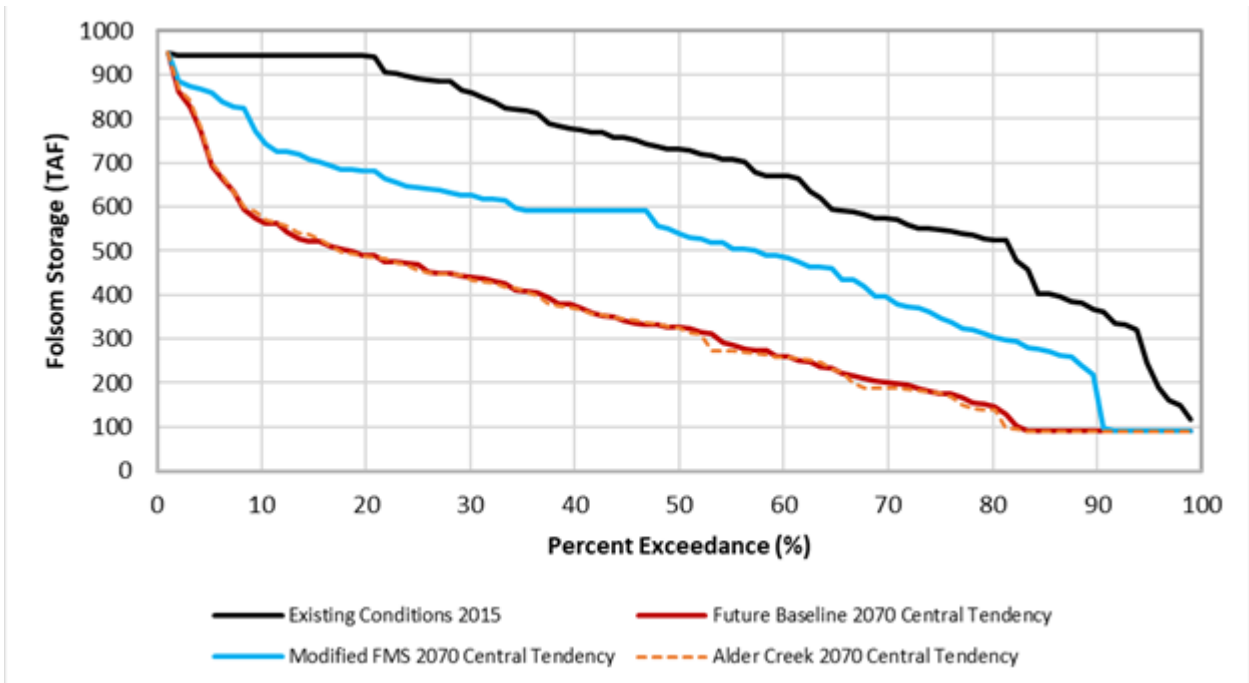


Figure G-42. Folsom Reservoir July Storage Exceedance Plots for Modified Flow Management Standard and Alder Creek Storage and Conservation Project Adaptation Portfolios Compared to Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

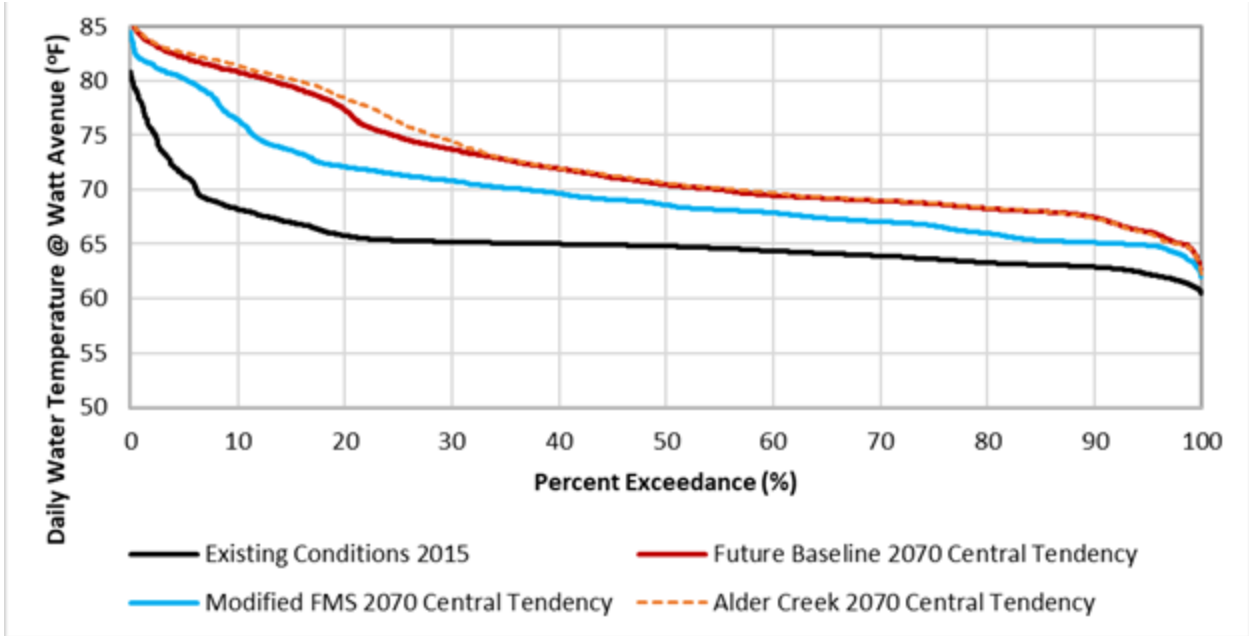


Figure G-43. Lower American River at Watt Avenue August Exceedance Plots of Daily Average Temperature for Modified Flow Management Standard and Alder Creek Storage and Conservation Project Adaptation Portfolios Compared to Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

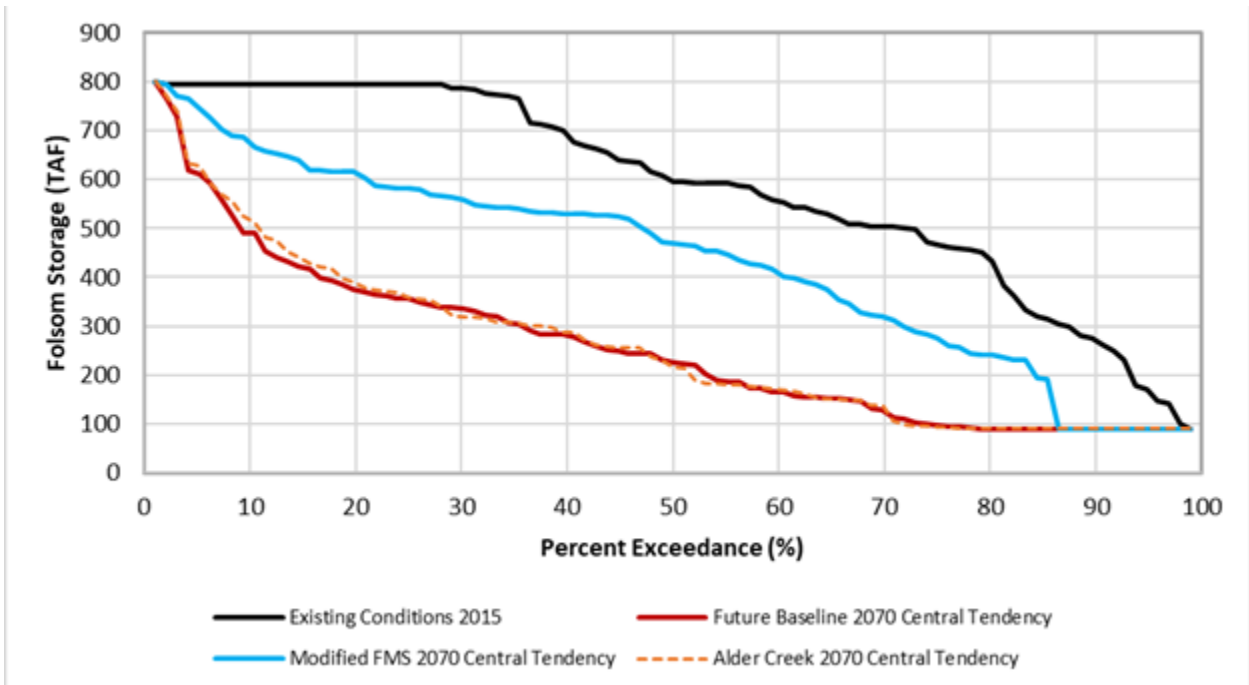


Figure G-44. Folsom Reservoir August Storage Exceedance Plots for Modified Flow Management Standard and Alder Creek Storage and Conservation Project Adaptation Portfolios Compared to Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

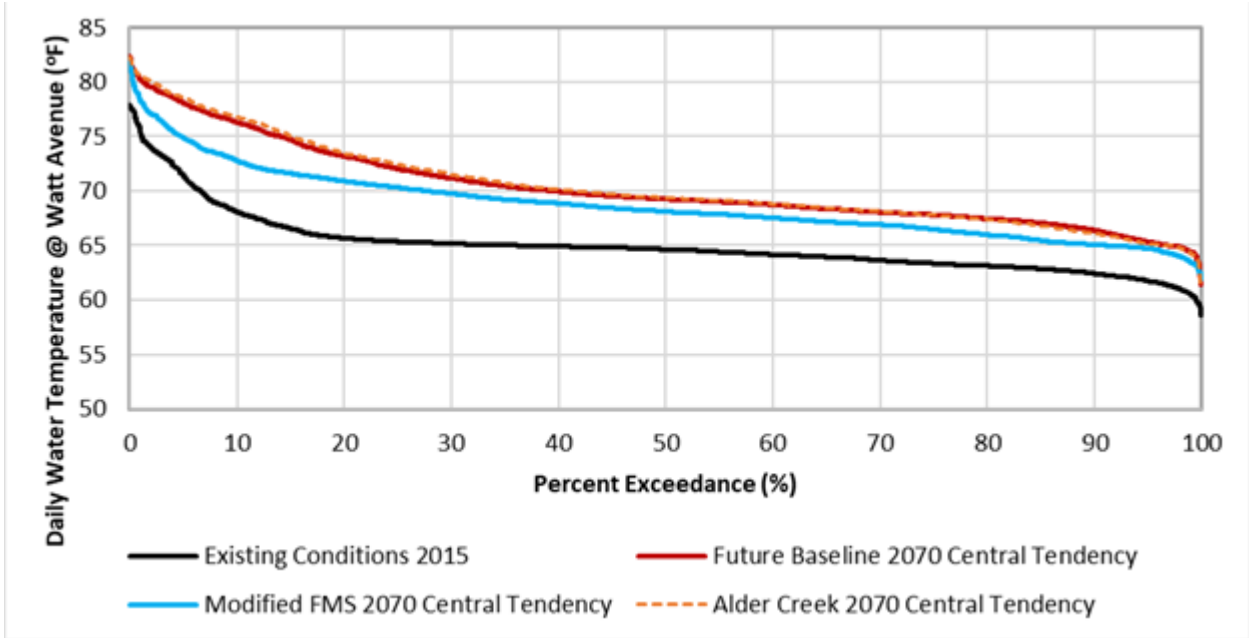


Figure G-45. Lower American River at Watt Avenue September Exceedance Plots of Daily Average Temperature for Modified Flow Management Standard and Alder Creek Storage and Conservation Project Adaptation Portfolios Compared to Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

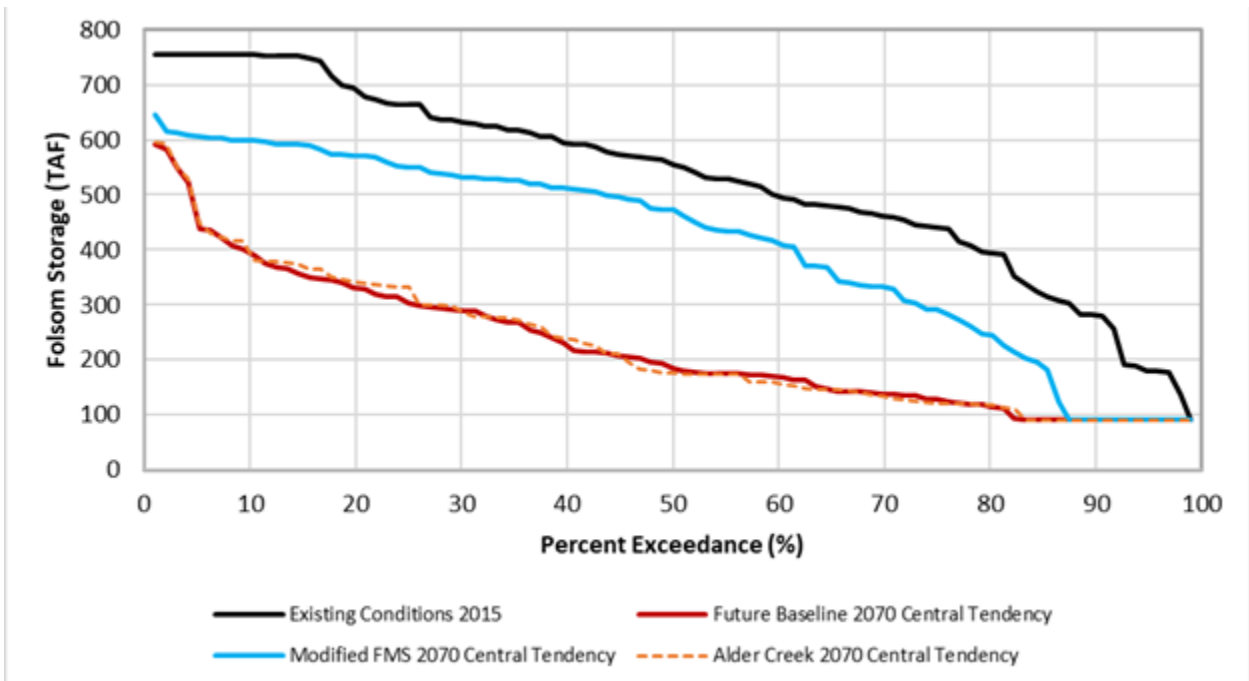


Figure G-46. Folsom Reservoir September Storage Exceedance Plots for Modified Flow Management Standard and Alder Creek Storage and Conservation Project Adaptation Portfolios Compared to Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

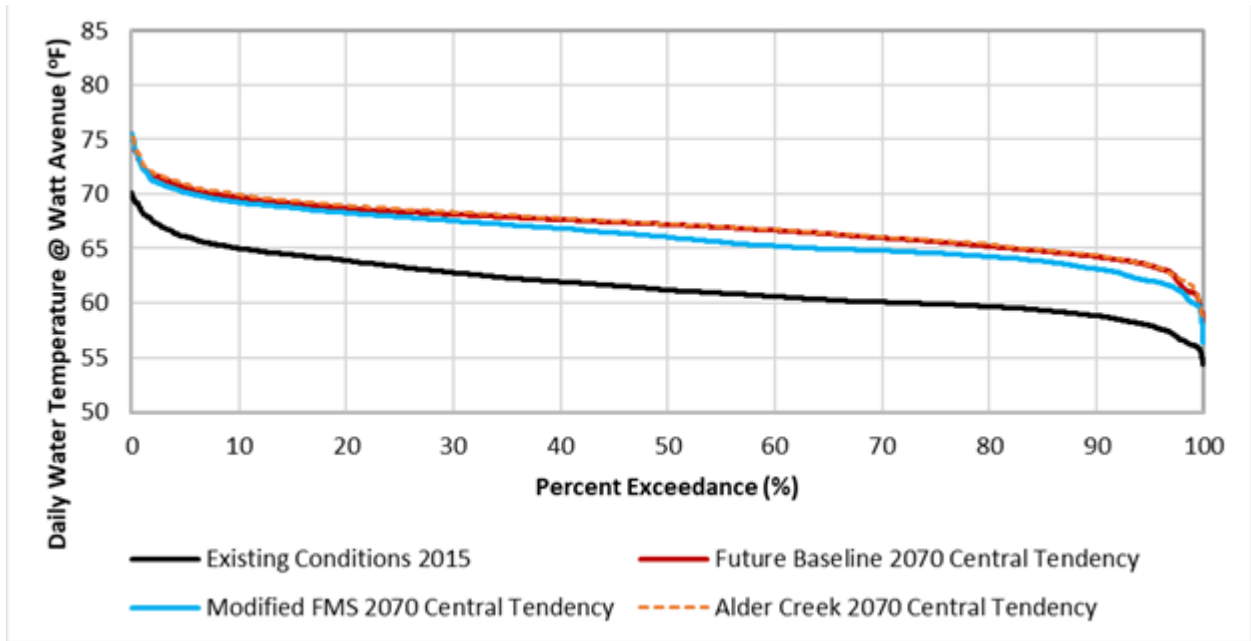


Figure G-47. Lower American River at Watt Avenue October Exceedance Plots of Daily Average Temperature for Modified Flow Management Standard and Alder Creek Storage and Conservation Project Adaptation Portfolios Compared to Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

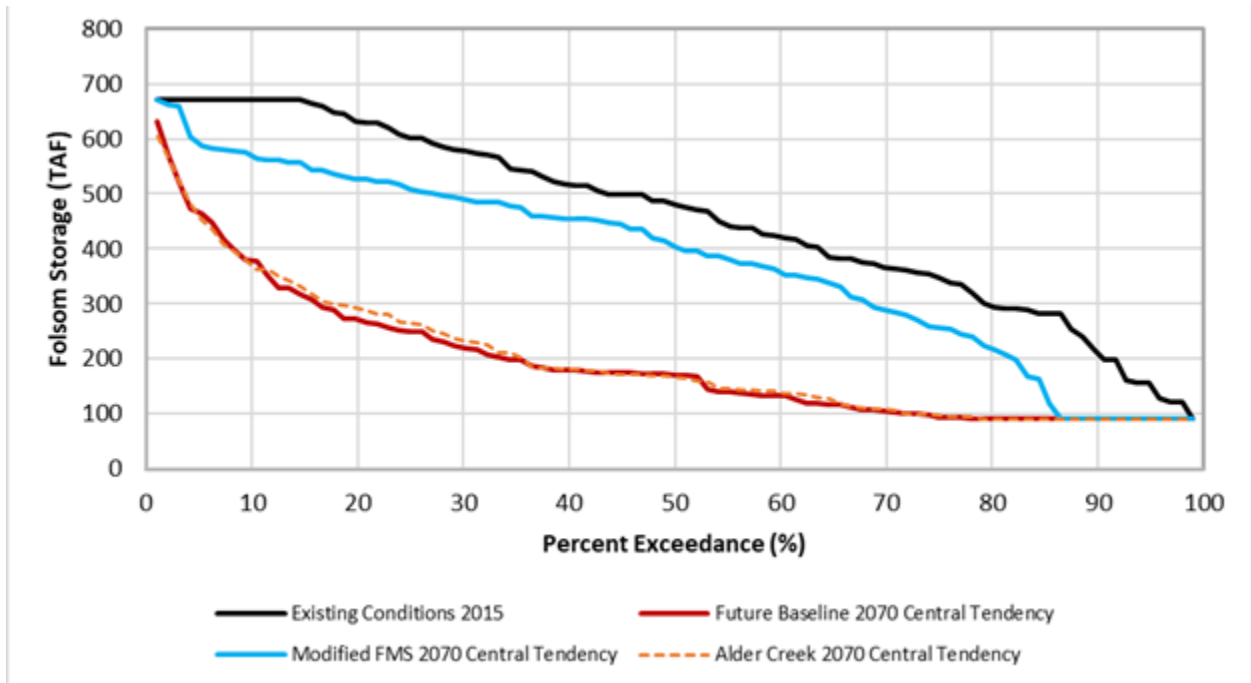


Figure G-48. Folsom Reservoir October Storage Exceedance Plots for Modified Flow Management Standard and Alder Creek Storage and Conservation Project Adaptation Portfolios Compared to Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

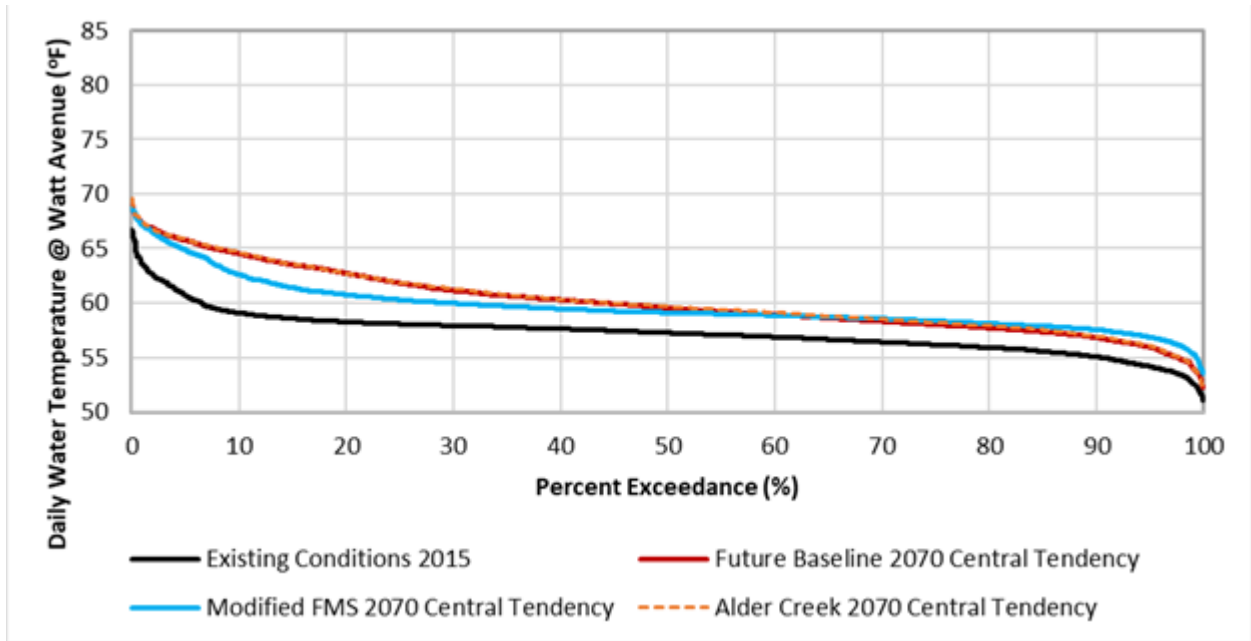


Figure G-49. Lower American River at Watt Avenue November Exceedance Plots of Daily Average Temperature for Modified Flow Management Standard and Alder Creek Storage and Conservation Project Adaptation Portfolios Compared to Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

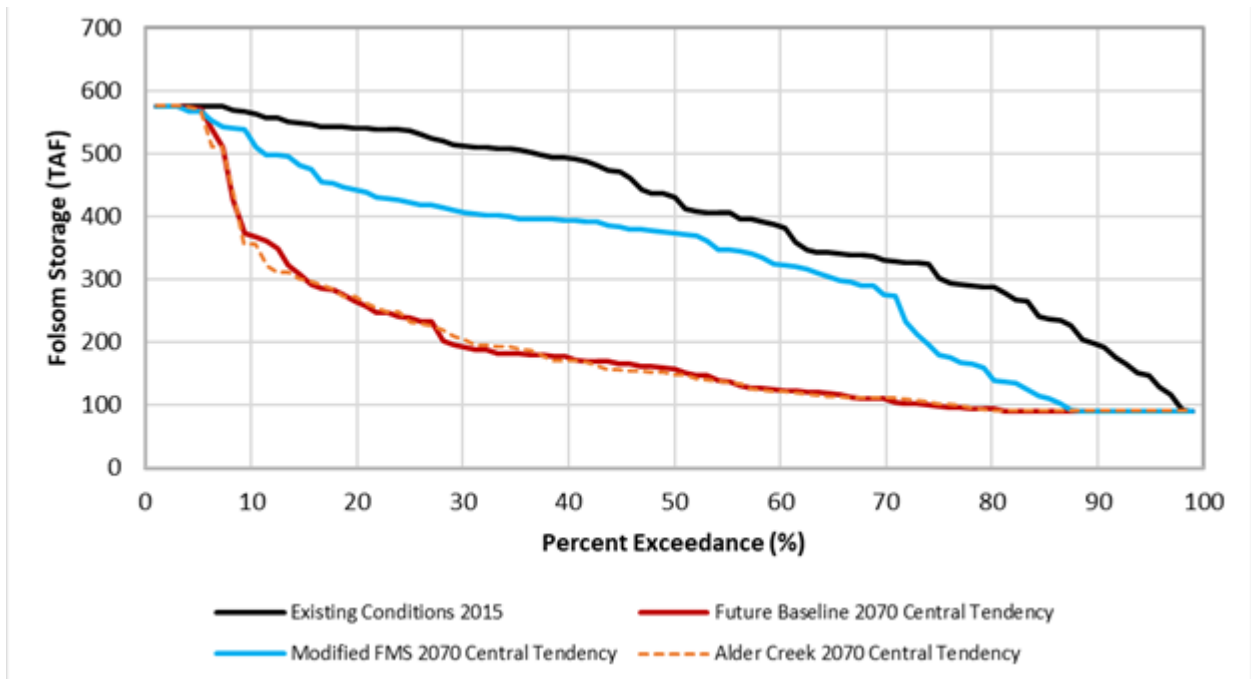


Figure G-50. Folsom Reservoir November Storage Exceedance Plots for Modified Flow Management Standard and Alder Creek Storage and Conservation Project Adaptation Portfolios Compared to Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios

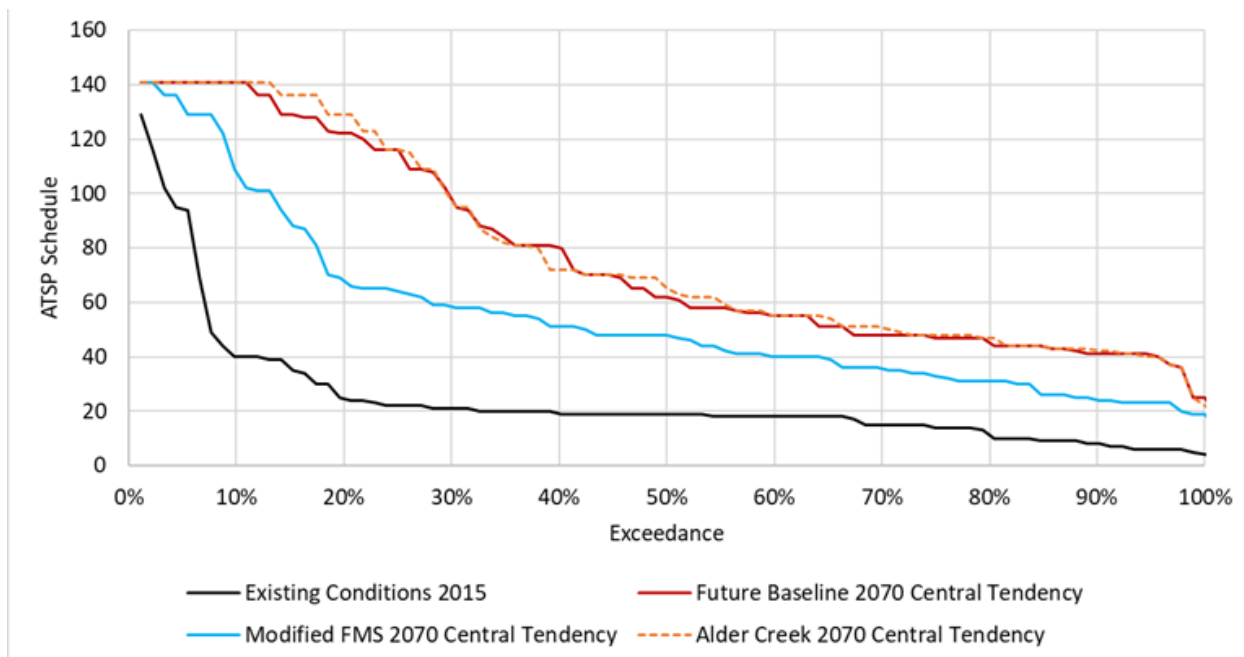


Figure G-51. Automated Temperature Selection Procedure (ATSP) Exceedance Plots of Folsom Reservoir Level Targeted for Flow Releases for Modified Flow Management Standard and Alder Creek Storage and Conservation Project Adaptation Portfolios Compared to Existing Conditions (2015) and Future Baseline (2070 Central Tendency) Scenarios