

Appendix 8H Electrical Conductivity

8H.1 Appendix Overview

This appendix begins with a brief overview of the electrical conductivity methodology and uncertainties and limitations inherent in the methodology, then provides tables of the results of the modeling approach. This appendix also includes technical memoranda prepared for use in the EIR/EIS. The formats, figure numbers, and table numbers in the individual memoranda were not changed because the memos were incorporated in their entirety. The following memos are included as separate Attachments to Appendix 8H:

- Attachment 1: BDCP EIR/EIS Water Quality Sensitivity Analysis
- Attachment 2: San Joaquin River Salinity Objective at and between Jersey Point and Prisoners Point

8H.2 Electrical Conductivity Methodology

Electrical conductivity (EC) was modeled quantitatively for the Delta using DSM2-QUAL model output. Section 8.3.1.1, 8.3.1.3, and the EC discussion under section 8.3.1.7 provide more detailed information regarding the assessment methodology for EC and the details of the quantitative approach. Tables to support the assessment are provided below.

The assessment of Bay-Delta WQCP EC objectives showed exceedances of these objectives at several locations under Existing Conditions, No Action, and BDCP Alternatives. Understanding the uncertainties and limitations in the modeling and assessment approach is important for interpreting the results and effects analysis, including assessment of compliance with water quality objectives. Please refer to Section 8.3.1.1, *Models Used and Their Linkages*, and Section 8.3.1.3, *Plan Area*, for a description of these limitations. In light of these limitations, the assessment of compliance is conducted in terms of assessing the overall direction and degree to which Delta EC would be affected relative to a baseline, and discussion of compliance does not imply that the alternative would literally cause Delta EC to be out of compliance a certain period of time. In other words, the model results are used in a comparative mode, not a predictive mode.

Furthermore, there are several factors related to the modeling approach that may result in modeling artifacts that show objective exceedance, when in reality no such exceedance would occur. Sensitivity analyses and further other analyses were performed to evaluate whether exceedances were indeed modeling artifacts or were potential project related impacts that may actually occur. The sensitivity analysis modeling runs were limited to the Existing Conditions, No Action Alternative, and Alternative 4 Scenario H3, but the findings from these analyses can generally be extended to other scenarios of Alternative 4 and the other project alternatives. A complete discussion of the sensitivity analysis modeling runs performed and the results for EC is included in Attachment 1 of this Appendix. Water quality modeling using CALSIM II and DSM2 for BDCP alternatives adjusts SWP and CVP operations to fully comply with D-1641 standards. CALSIM II is a model with a monthly time step, whereas a number of D-1641 standards are described in shorter

1 time steps. The DSM2 model is used to refine CALSIM II simulation results for a shorter 15-minute
2 time step, and to account for other localized model assumptions (e.g., tide) and more Delta-specific
3 assumptions. This variation in time step can create an unintended consequence of CALSIM II
4 correctly adjusting modeled reservoir releases and exports in order to maintain compliance over a
5 monthly average, while DSM2 potentially reporting an exceedance over part of the month based
6 upon those same reservoir releases and exports. Therefore, DSM2 results may show an exceedance
7 of D-1641 standards when, in these cases, this is a modeling anomaly and not reflective of an actual
8 violation.

9 It should be noted that many of the modeling results showing exceedance of D-1641 standards
10 reported in Appendix 8H are the result of this mismatch in modeling time step, known shortcomings
11 in the ANN model to mirror DSM2 modeled flow-salinity interaction, and/or CALSIM II model's
12 limited ability to simulate real-time operational adjustments to avoid exceedance of the standards in
13 shorter time steps. DWR and USBR have every intention of operating SWP and CVP facilities by fine
14 tuning reservoir storage and exports in real time to meet D-1641 standards, and any changes to D-
15 1641 as adopted by the SWRCB. Actual operations are continuously adjusted to respond to reservoir
16 storages, river flows, exports, in-Delta demands, tides, and other factors to insure compliance to
17 regulatory requirements to the extent possible.

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19 storage and exports in real time to meet D-1641 standards, and any changes to D-1641 as adopted
20 by the SWRCB. Actual operations are continuously adjusted to respond to reservoir storages, river
21 flows, exports, in-Delta demands, tides, and other factors to insure compliance to regulatory
22 requirements to the extent possible.

23 For further information, additional description of the model limitations related to the water quality
24 modeling results are found in Appendix 5A. The limitations of the input assumptions described in
25 Appendix 5A, such as Delta agricultural drainage and return flows, should be considered when
26 DSM2 EC results are used to compare performance of a baseline or an alternative against the
27 standards.

28 **8H.3 Electrical Conductivity Modeling Results and** 29 **Compliance Assessment Tables**

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1 Table EC-1. Number of days Delta locations exceed Bay-Delta Water Quality Control Plan objectives, and number of days out of compliance, for Alternative 1 LLT.

Location ^a	# of Days Objective Applicable	# of Days Objective Exceeded ^b			% of Days Objective Exceeded ^b			# of Days Out of Compliance ^c			% of Days Out of Compliance ^c		
		Ex. Cond.	No Act. LLT	Alt 1 LLT	Ex. Cond.	No Act. LLT	Alt 1 LLT	Ex. Cond.	No Act. LLT	Alt 1 LLT	Ex. Cond.	No Act. LLT	Alt 1 LLT
Sacramento River at Emmaton / Three Mile Slough nr. Sacramento River (AGR) ^d	2,176	120	<u>297258</u>	<u>5444</u>	6	<u>1412</u>	<u>22</u>	233	<u>540485</u>	<u>160448</u>	11	<u>2522</u>	<u>77</u>
Sacramento River at Emmaton (AGR)	2,176	120	<u>297258</u>	<u>668591</u>	6	<u>1412</u>	<u>3127</u>	233	<u>540485</u>	<u>977849</u>	11	<u>2522</u>	<u>4539</u>
San Joaquin River at Jersey Point (AGR)	2,176	415	<u>299230</u>	<u>319257</u>	19	<u>1411</u>	<u>1512</u>	623	<u>566464</u>	<u>514426</u>	29	<u>2621</u>	<u>2420</u>
S. Fork Mokelumne River at Terminous (AGR)	2,176	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>
San Joaquin River at San Andreas Landing (AGR)	2,176	14	<u>1313</u>	<u>7349</u>	1	<u>14</u>	<u>32</u>	27	<u>2626</u>	<u>138101</u>	1	<u>14</u>	<u>65</u>
San Joaquin River at Vernalis (AGR)	5,842	163	<u>154454</u>	<u>154454</u>	3	<u>33</u>	<u>33</u>	424	<u>415415</u>	<u>415415</u>	7	<u>77</u>	<u>77</u>
San Joaquin River at Brandt Bridge (AGR)	5,842	188	<u>183483</u>	<u>193193</u>	3	<u>33</u>	<u>33</u>	449	<u>444444</u>	<u>483483</u>	8	<u>88</u>	<u>88</u>
Old River near Middle River (AGR)	5,842	183	<u>177477</u>	<u>178178</u>	3	<u>33</u>	<u>33</u>	444	<u>438438</u>	<u>439439</u>	8	<u>77</u>	<u>88</u>
Old River at Tracy Bridge (AGR)	5,842	250	<u>206206</u>	<u>211211</u>	4	<u>44</u>	<u>44</u>	569	<u>467467</u>	<u>472472</u>	10	<u>88</u>	<u>88</u>
San Joaquin River at Jersey Point (F&W)	671	0	<u>210</u>	<u>210</u>	0	<u>30</u>	<u>30</u>	0	<u>210</u>	<u>210</u>	0	<u>30</u>	<u>30</u>
San Joaquin River at Prisoners Point (F&W)	671	38	<u>1040</u>	<u>1747</u>	6	<u>14</u>	<u>23</u>	64	<u>1040</u>	<u>1747</u>	10	<u>14</u>	<u>23</u>

Notes:

^a (AGR) = for the protection of agricultural beneficial uses; (F&W) = for the protection of fish and wildlife beneficial uses.

^b Number of days the Bay-Delta Water Quality Control Plan EC objective was exceeded at the location.

^c Number of days the EC at the location was out of compliance with the Bay-Delta Water Quality Control Plan EC objective. Days out of compliance was determined according to Table 2, footnote 2, which states: "Determination of compliance with an objective expressed as a running average begins on the last day of the averaging period. The averaging period commences with the first day of the time period for the applicable objective. If the objective is not met on the last day of the averaging period, all days in the averaging period are considered out of compliance."

^d Data for Existing Conditions and No Action LLT are for Sacramento River at Emmaton, per the definition of these baselines. Data for the BDCP alternative is for Three Mile Slough, per the description of the alternative.

1 Table EC-2. Number of days Delta locations exceed Bay-Delta Water Quality Control Plan objectives, and number of days out of compliance, for Alternative 2 LLT.

Location ^a	# of Days Objective Applicable	# of Days Objective Exceeded ^b			% of Days Objective Exceeded ^b			# of Days Out of Compliance ^c			% of Days Out of Compliance ^c		
		Ex. Cond.	No Act. LLT	Alt 2 LLT	Ex. Cond.	No Act. LLT	Alt 2 LLT	Ex. Cond.	No Act. LLT	Alt 2 LLT	Ex. Cond.	No Act. LLT	Alt 2 LLT
Sacramento River at Emmaton / Three Mile Slough nr. Sacramento River (AGR) ^d	2,176	120	<u>297258</u>	<u>3838</u>	6	<u>1412</u>	<u>22</u>	233	<u>540485</u>	<u>142142</u>	11	<u>2522</u>	<u>77</u>
Sacramento River at Emmaton (AGR)	2,176	120	<u>297258</u>	<u>567491</u>	6	<u>1412</u>	<u>2623</u>	233	<u>540485</u>	<u>868761</u>	11	<u>2522</u>	<u>4035</u>
San Joaquin River at Jersey Point (AGR)	2,176	415	<u>299230</u>	<u>377322</u>	19	<u>1411</u>	<u>1715</u>	623	<u>566464</u>	<u>598524</u>	29	<u>2621</u>	<u>2724</u>
S. Fork Mokelumne River at Terminous (AGR)	2,176	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>
San Joaquin River at San Andreas Landing (AGR)	2,176	14	<u>1343</u>	<u>10578</u>	1	<u>14</u>	<u>54</u>	27	<u>2626</u>	<u>174134</u>	1	<u>14</u>	<u>86</u>
San Joaquin River at Vernalis (AGR)	5,842	163	<u>154154</u>	<u>154154</u>	3	<u>33</u>	<u>33</u>	424	<u>415415</u>	<u>415415</u>	7	<u>77</u>	<u>77</u>
San Joaquin River at Brandt Bridge (AGR)	5,842	188	<u>183483</u>	<u>177477</u>	3	<u>33</u>	<u>33</u>	449	<u>444444</u>	<u>438438</u>	8	<u>88</u>	<u>77</u>
Old River near Middle River (AGR)	5,842	183	<u>177477</u>	<u>184184</u>	3	<u>33</u>	<u>33</u>	444	<u>438438</u>	<u>445445</u>	8	<u>77</u>	<u>88</u>
Old River at Tracy Bridge (AGR)	5,842	250	<u>206206</u>	<u>330330</u>	4	<u>44</u>	<u>66</u>	569	<u>467467</u>	<u>678678</u>	10	<u>88</u>	<u>1212</u>
San Joaquin River at Jersey Point (F&W)	671	0	<u>210</u>	<u>100</u>	0	<u>30</u>	<u>10</u>	0	<u>210</u>	<u>150</u>	0	<u>30</u>	<u>20</u>
San Joaquin River at Prisoners Point (F&W)	671	38	<u>1040</u>	<u>185167</u>	6	<u>14</u>	<u>2525</u>	64	<u>1040</u>	<u>210179</u>	10	<u>14</u>	<u>2927</u>
Notes:													
^a (AGR) = for the protection of agricultural beneficial uses; (F&W) = for the protection of fish and wildlife beneficial uses.													
^b Number of days the Bay-Delta Water Quality Control Plan EC objective was exceeded at the location.													
^c Number of days the EC at the location was out of compliance with the Bay-Delta Water Quality Control Plan EC objective. Days out of compliance was determined according to Table 2, footnote 2, which states: "Determination of compliance with an objective expressed as a running average begins on the last day of the averaging period. The averaging period commences with the first day of the time period for the applicable objective. If the objective is not met on the last day of the averaging period, all days in the averaging period are considered out of compliance."													
^d Data for Existing Conditions and No Action LLT are for Sacramento River at Emmaton, per the definition of these baselines. Data for the BDCP alternative is for Three Mile Slough, per the description of the alternative.													

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1 Table EC-3. Number of days Delta locations exceed Bay-Delta Water Quality Control Plan objectives, and number of days out of compliance, for Alternative 3 LLT.

Location ^a	# of Days Objective Applicable	# of Days Objective Exceeded ^b			% of Days Objective Exceeded ^b			# of Days Out of Compliance ^c			% of Days Out of Compliance ^c		
		Ex. Cond.	No Act. LLT	Alt 3 LLT	Ex. Cond.	No Act. LLT	Alt 3 LLT	Ex. Cond.	No Act. LLT	Alt 3 LLT	Ex. Cond.	No Act. LLT	Alt 3 LLT
Sacramento River at Emmaton / Three Mile Slough nr. Sacramento River (AGR) ^d	2,176	120	<u>297258</u>	<u>5342</u>	6	<u>1412</u>	<u>22</u>	233	<u>540485</u>	<u>159146</u>	11	<u>2522</u>	<u>77</u>
Sacramento River at Emmaton (AGR)	2,176	120	<u>297258</u>	<u>663583</u>	6	<u>1412</u>	<u>3027</u>	233	<u>540485</u>	<u>951840</u>	11	<u>2522</u>	<u>4439</u>
San Joaquin River at Jersey Point (AGR)	2,176	415	<u>299230</u>	<u>328261</u>	19	<u>1411</u>	<u>1512</u>	623	<u>566464</u>	<u>536456</u>	29	<u>2621</u>	<u>2524</u>
S. Fork Mokelumne River at Terminous (AGR)	2,176	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>
San Joaquin River at San Andreas Landing (AGR)	2,176	14	<u>1343</u>	<u>7753</u>	1	<u>14</u>	<u>42</u>	27	<u>2626</u>	<u>12992</u>	1	<u>14</u>	<u>64</u>
San Joaquin River at Vernalis (AGR)	5,842	163	<u>154154</u>	<u>154154</u>	3	<u>33</u>	<u>33</u>	424	<u>415415</u>	<u>415415</u>	7	<u>77</u>	<u>77</u>
San Joaquin River at Brandt Bridge (AGR)	5,842	188	<u>183483</u>	<u>181484</u>	3	<u>33</u>	<u>33</u>	449	<u>444444</u>	<u>442442</u>	8	<u>88</u>	<u>88</u>
Old River near Middle River (AGR)	5,842	183	<u>177477</u>	<u>178178</u>	3	<u>33</u>	<u>33</u>	444	<u>438438</u>	<u>439439</u>	8	<u>77</u>	<u>88</u>
Old River at Tracy Bridge (AGR)	5,842	250	<u>206206</u>	<u>210210</u>	4	<u>44</u>	<u>44</u>	569	<u>467467</u>	<u>471471</u>	10	<u>88</u>	<u>88</u>
San Joaquin River at Jersey Point (F&W)	671	0	<u>210</u>	<u>210</u>	0	<u>30</u>	<u>30</u>	0	<u>210</u>	<u>210</u>	0	<u>30</u>	<u>30</u>
San Joaquin River at Prisoners Point (F&W)	671	38	<u>1040</u>	<u>1616</u>	6	<u>14</u>	<u>22</u>	64	<u>1040</u>	<u>1616</u>	10	<u>14</u>	<u>22</u>
Notes:													
^a (AGR) = for the protection of agricultural beneficial uses; (F&W) = for the protection of fish and wildlife beneficial uses.													
^b Number of days the Bay-Delta Water Quality Control Plan EC objective was exceeded at the location.													
^c Number of days the EC at the location was out of compliance with the Bay-Delta Water Quality Control Plan EC objective. Days out of compliance was determined according to Table 2, footnote 2, which states: "Determination of compliance with an objective expressed as a running average begins on the last day of the averaging period. The averaging period commences with the first day of the time period for the applicable objective. If the objective is not met on the last day of the averaging period, all days in the averaging period are considered out of compliance."													
^d Data for Existing Conditions and No Action LLT are for Sacramento River at Emmaton, per the definition of these baselines. Data for the BDCP alternative is for Three Mile Slough, per the description of the alternative.													

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1 Table EC-4. Number of days Delta locations exceed Bay-Delta Water Quality Control Plan objectives, and number of days out of compliance, for Alternative 4 LLT.

Location ^a	# of Days Objective Applicable	# of Days Objective Exceeded ^b						% of Days Objective Exceeded ^b						# of Days Out of Compliance ^c						% of Days Out of Compliance ^c					
		Ex. Cond.	No Act. LLT	Alt 4 LLT H1	Alt 4 LLT H2	Alt 4 LLT H3	Alt 4 LLT H4	Ex. Cond.	No Act. LLT	Alt 4 LLT H1	Alt 4 LLT H2	Alt 4 LLT H3	Alt 4 LLT H4	Ex. Cond.	No Act. LLT	Alt 4 LLT H1	Alt 4 LLT H2	Alt 4 LLT H3	Alt 4 LLT H4	Ex. Cond.	No Act. LLT	Alt 4 LLT H1	Alt 4 LLT H2	Alt 4 LLT H3	Alt 4 LLT H4
Sacramento River at Emmaton / Three Mile Slough nr. Sacramento River (AGR) ^d	2,176	120	29725 8	3737	5756	3233	5753	6	1412	22	33	12	32	233	54048 5	15415 4	18717 3	13613 7	18715 7	11	2522	77	98	66	97
Sacramento River at Emmaton (AGR)	2,176	120	29725 8	58750 8	62654 6	60150 7	62755 3	6	1412	2723	2925	2823	2925	233	54048 5	87676 6	93584 3	92379 1	93082 2	11	2522	4035	4337	4236	4338
San Joaquin River at Jersey Point (AGR)	2,176	415	29923 0	41135 4	33628 9	38032 7	30624 7	19	1411	1916	1513	1745	1411	623	56646 4	63856 2	53147 1	59452 2	52042 9	29	2621	2926	2422	2724	2420
S. Fork Mokelumne River at Terminous (AGR)	2,176	0	00	00	00	00	00	0	00	00	00	00	00	0	00	00	00	00	00	0	00	00	00	00	00
San Joaquin River at San Andreas Landing (AGR)	2,176	14	1313	11692	7070	12195	5555	1	14	54	33	64	33	27	2626	19415 7	13513 5	19916 0	10710 7	1	14	97	66	97	55
San Joaquin River at Vernalis (AGR)	5,842	163	15415 4	15415 4	15345 3	15415 4	15345 3	3	33	33	33	33	33	424	41544 5	41544 5	41444 4	41544 5	41444 4	7	77	77	77	77	77
San Joaquin River at Brandt Bridge (AGR)	5,842	188	18348 3	17747 7	17647 6	17747 7	17647 6	3	33	33	33	33	33	449	44444 4	43843 8	43743 7	43843 8	43743 7	8	88	77	77	77	77
Old River near Middle River (AGR)	5,842	183	17747 7	18448 4	18448 4	18448 4	18448 4	3	33	33	33	33	33	444	43843 8	44544 5	44544 5	44544 5	44544 5	8	77	88	88	88	88
Old River at Tracy Bridge (AGR)	5,842	250	20620 6	32732 7	31734 7	33533 5	32032 0	4	44	66	55	66	55	569	46746 7	67567 5	63663 6	68368 3	63963 9	10	88	1242	1144	1242	1144
San Joaquin River at Jersey Point (F&W)	671	0	210	110	00	100	100	0	30	20	00	10	10	0	210	160	00	150	150	0	30	20	00	20	20
San Joaquin River at Prisoners Point (F&W)	671	38	1010	15543 6	22520 6	16114 3	22520 7	6	14	2120	3131	2221	3131	64	1010	18144 9	23820 6	20016 9	23820 7	10	11	2522	3331	2725	3331

Notes:

^a (AGR) = for the protection of agricultural beneficial uses; (F&W) = for the protection of fish and wildlife beneficial uses.

^b Number of days the Bay-Delta Water Quality Control Plan EC objective was exceeded at the location.

^c Number of days the EC at the location was out of compliance with the Bay-Delta Water Quality Control Plan EC objective. Days out of compliance was determined according to Table 2, footnote 2, which states: "Determination of compliance with an objective expressed as a running average begins on the last day of the averaging period. The averaging period commences with the first day of the time period for the applicable objective. If the objective is not met on the last day of the averaging period, all days in the averaging period are considered out of compliance."

^d Data for Existing Conditions and No Action LLT are for Sacramento River at Emmaton, per the definition of these baselines. Data for the BDCP alternative is for Three Mile Slough, per the description of the alternative.

1 Table EC-5. Number of days Delta locations exceed Bay-Delta Water Quality Control Plan objectives, and number of days out of compliance, for Alternative 5 LLT.

Location ^a	# of Days Objective Applicable	# of Days Objective Exceeded ^b			% of Days Objective Exceeded ^b			# of Days Out of Compliance ^c			% of Days Out of Compliance ^c		
		Ex. Cond.	No Act. LLT	Alt 5 LLT	Ex. Cond.	No Act. LLT	Alt 5 LLT	Ex. Cond.	No Act. LLT	Alt 5 LLT	Ex. Cond.	No Act. LLT	Alt 5 LLT
Sacramento River at Emmaton / Three Mile Slough nr. Sacramento River (AGR) ^d	2,176	120	<u>297258</u>	<u>5347</u>	6	<u>1412</u>	<u>22</u>	233	<u>540485</u>	<u>169134</u>	11	<u>2522</u>	<u>86</u>
Sacramento River at Emmaton (AGR)	2,176	120	<u>297258</u>	<u>545491</u>	6	<u>1412</u>	<u>2523</u>	233	<u>540485</u>	<u>825765</u>	11	<u>2522</u>	<u>3835</u>
San Joaquin River at Jersey Point (AGR)	2,176	415	<u>299230</u>	<u>429345</u>	19	<u>1411</u>	<u>2016</u>	623	<u>566464</u>	<u>647524</u>	29	<u>2621</u>	<u>3024</u>
S. Fork Mokelumne River at Terminous (AGR)	2,176	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>
San Joaquin River at San Andreas Landing (AGR)	2,176	14	<u>1343</u>	<u>10096</u>	1	<u>14</u>	<u>54</u>	27	<u>2626</u>	<u>186161</u>	1	<u>14</u>	<u>97</u>
San Joaquin River at Vernalis (AGR)	5,842	163	<u>154154</u>	<u>154154</u>	3	<u>33</u>	<u>33</u>	424	<u>415415</u>	<u>415415</u>	7	<u>77</u>	<u>77</u>
San Joaquin River at Brandt Bridge (AGR)	5,842	188	<u>183483</u>	<u>182482</u>	3	<u>33</u>	<u>33</u>	449	<u>444444</u>	<u>443443</u>	8	<u>88</u>	<u>88</u>
Old River near Middle River (AGR)	5,842	183	<u>177477</u>	<u>178178</u>	3	<u>33</u>	<u>33</u>	444	<u>438438</u>	<u>439439</u>	8	<u>77</u>	<u>88</u>
Old River at Tracy Bridge (AGR)	5,842	250	<u>206206</u>	<u>263263</u>	4	<u>44</u>	<u>55</u>	569	<u>467467</u>	<u>611611</u>	10	<u>88</u>	<u>1010</u>
San Joaquin River at Jersey Point (F&W)	671	0	<u>210</u>	<u>200</u>	0	<u>30</u>	<u>30</u>	0	<u>210</u>	<u>200</u>	0	<u>30</u>	<u>30</u>
San Joaquin River at Prisoners Point (F&W)	671	38	<u>1040</u>	<u>5959</u>	6	<u>14</u>	<u>89</u>	64	<u>1040</u>	<u>8585</u>	10	<u>14</u>	<u>1213</u>
Notes:													
^a (AGR) = for the protection of agricultural beneficial uses; (F&W) = for the protection of fish and wildlife beneficial uses.													
^b Number of days the Bay-Delta Water Quality Control Plan EC objective was exceeded at the location.													
^c Number of days the EC at the location was out of compliance with the Bay-Delta Water Quality Control Plan EC objective. Days out of compliance was determined according to Table 2, footnote 2, which states: "Determination of compliance with an objective expressed as a running average begins on the last day of the averaging period. The averaging period commences with the first day of the time period for the applicable objective. If the objective is not met on the last day of the averaging period, all days in the averaging period are considered out of compliance."													
^d Data for Existing Conditions and No Action LLT are for Sacramento River at Emmaton, per the definition of these baselines. Data for the BDCP alternative is for Three Mile Slough, per the description of the alternative.													

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1 Table EC-6. Number of days Delta locations exceed Bay-Delta Water Quality Control Plan objectives, and number of days out of compliance, for Alternative 6 LLT.

Location ^a	# of Days Objective Applicable	# of Days Objective Exceeded ^b			% of Days Objective Exceeded ^b			# of Days Out of Compliance ^c			% of Days Out of Compliance ^c		
		Ex. Cond.	No Act. LLT	Alt 6 LLT	Ex. Cond.	No Act. LLT	Alt 6 LLT	Ex. Cond.	No Act. LLT	Alt 6 LLT	Ex. Cond.	No Act. LLT	Alt 6 LLT
Sacramento River at Emmaton / Three Mile Slough nr. Sacramento River (AGR) ^d	2,176	120	<u>297258</u>	<u>6351</u>	6	<u>1412</u>	<u>32</u>	233	<u>540485</u>	<u>154103</u>	11	<u>2522</u>	<u>75</u>
Sacramento River at Emmaton (AGR)	2,176	120	<u>297258</u>	<u>691608</u>	6	<u>1412</u>	<u>3228</u>	233	<u>540485</u>	<u>955864</u>	11	<u>2522</u>	<u>4440</u>
San Joaquin River at Jersey Point (AGR)	2,176	415	<u>299230</u>	<u>6322</u>	19	<u>1411</u>	<u>34</u>	623	<u>566464</u>	<u>15461</u>	29	<u>2621</u>	<u>73</u>
S. Fork Mokelumne River at Terminous (AGR)	2,176	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>
San Joaquin River at San Andreas Landing (AGR)	2,176	14	<u>1343</u>	<u>00</u>	1	<u>14</u>	<u>00</u>	27	<u>2626</u>	<u>00</u>	1	<u>14</u>	<u>00</u>
San Joaquin River at Vernalis (AGR)	5,842	163	<u>154154</u>	<u>153153</u>	3	<u>33</u>	<u>33</u>	424	<u>415415</u>	<u>414414</u>	7	<u>77</u>	<u>77</u>
San Joaquin River at Brandt Bridge (AGR)	5,842	188	<u>183483</u>	<u>179479</u>	3	<u>33</u>	<u>33</u>	449	<u>444444</u>	<u>440440</u>	8	<u>88</u>	<u>88</u>
Old River near Middle River (AGR)	5,842	183	<u>177477</u>	<u>177477</u>	3	<u>33</u>	<u>33</u>	444	<u>438438</u>	<u>438438</u>	8	<u>77</u>	<u>77</u>
Old River at Tracy Bridge (AGR)	5,842	250	<u>206206</u>	<u>218218</u>	4	<u>44</u>	<u>44</u>	569	<u>467467</u>	<u>479479</u>	10	<u>88</u>	<u>88</u>
San Joaquin River at Jersey Point (F&W)	671	0	<u>210</u>	<u>2323</u>	0	<u>30</u>	<u>33</u>	0	<u>210</u>	<u>3636</u>	0	<u>30</u>	<u>55</u>
San Joaquin River at Prisoners Point (F&W)	671	38	<u>1040</u>	<u>292231</u>	6	<u>14</u>	<u>4034</u>	64	<u>1040</u>	<u>292231</u>	10	<u>14</u>	<u>4034</u>

Notes:

^a (AGR) = for the protection of agricultural beneficial uses; (F&W) = for the protection of fish and wildlife beneficial uses.

^b Number of days the Bay-Delta Water Quality Control Plan EC objective was exceeded at the location.

^c Number of days the EC at the location was out of compliance with the Bay-Delta Water Quality Control Plan EC objective. Days out of compliance was determined according to Table 2, footnote 2, which states: "Determination of compliance with an objective expressed as a running average begins on the last day of the averaging period. The averaging period commences with the first day of the time period for the applicable objective. If the objective is not met on the last day of the averaging period, all days in the averaging period are considered out of compliance."

^d Data for Existing Conditions and No Action LLT are for Sacramento River at Emmaton, per the definition of these baselines. Data for the BDCP alternative is for Three Mile Slough, per the description of the alternative.

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1 Table EC-7. Number of days Delta locations exceed Bay-Delta Water Quality Control Plan objectives, and number of days out of compliance, for Alternative 7 LLT.

Location ^a	# of Days Objective Applicable	# of Days Objective Exceeded ^b			% of Days Objective Exceeded ^b			# of Days Out of Compliance ^c			% of Days Out of Compliance ^c		
		Ex. Cond.	No Act. LLT	Alt 7 LLT	Ex. Cond.	No Act. LLT	Alt 7 LLT	Ex. Cond.	No Act. LLT	Alt 7 LLT	Ex. Cond.	No Act. LLT	Alt 7 LLT
Sacramento River at Emmaton / Three Mile Slough nr. Sacramento River (AGR) ^d	2,176	120	<u>297258</u>	<u>4845</u>	6	<u>1412</u>	<u>22</u>	233	<u>540485</u>	<u>152436</u>	11	<u>2522</u>	<u>76</u>
Sacramento River at Emmaton (AGR)	2,176	120	<u>297258</u>	<u>412355</u>	6	<u>1412</u>	<u>1946</u>	233	<u>540485</u>	<u>631562</u>	11	<u>2522</u>	<u>2926</u>
San Joaquin River at Jersey Point (AGR)	2,176	415	<u>299230</u>	<u>372313</u>	19	<u>1411</u>	<u>1744</u>	623	<u>566464</u>	<u>593508</u>	29	<u>2621</u>	<u>2723</u>
S. Fork Mokelumne River at Terminous (AGR)	2,176	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>
San Joaquin River at San Andreas Landing (AGR)	2,176	14	<u>1343</u>	<u>8075</u>	1	<u>14</u>	<u>43</u>	27	<u>2626</u>	<u>145427</u>	1	<u>14</u>	<u>76</u>
San Joaquin River at Vernalis (AGR)	5,842	163	<u>154454</u>	<u>155155</u>	3	<u>33</u>	<u>33</u>	424	<u>415415</u>	<u>445445</u>	7	<u>77</u>	<u>88</u>
San Joaquin River at Brandt Bridge (AGR)	5,842	188	<u>183483</u>	<u>207207</u>	3	<u>33</u>	<u>44</u>	449	<u>444444</u>	<u>497497</u>	8	<u>88</u>	<u>99</u>
Old River near Middle River (AGR)	5,842	183	<u>177477</u>	<u>178178</u>	3	<u>33</u>	<u>33</u>	444	<u>438438</u>	<u>439439</u>	8	<u>77</u>	<u>88</u>
Old River at Tracy Bridge (AGR)	5,842	250	<u>206206</u>	<u>219219</u>	4	<u>44</u>	<u>44</u>	569	<u>467467</u>	<u>480480</u>	10	<u>88</u>	<u>88</u>
San Joaquin River at Jersey Point (F&W)	671	0	<u>210</u>	<u>00</u>	0	<u>30</u>	<u>00</u>	0	<u>210</u>	<u>00</u>	0	<u>30</u>	<u>00</u>
San Joaquin River at Prisoners Point (F&W)	671	38	<u>1040</u>	<u>294233</u>	6	<u>14</u>	<u>4035</u>	64	<u>1040</u>	<u>294233</u>	10	<u>14</u>	<u>4035</u>

Notes:

^a (AGR) = for the protection of agricultural beneficial uses; (F&W) = for the protection of fish and wildlife beneficial uses.

^b Number of days the Bay-Delta Water Quality Control Plan EC objective was exceeded at the location.

^c Number of days the EC at the location was out of compliance with the Bay-Delta Water Quality Control Plan EC objective. Days out of compliance was determined according to Table 2, footnote 2, which states: "Determination of compliance with an objective expressed as a running average begins on the last day of the averaging period. The averaging period commences with the first day of the time period for the applicable objective. If the objective is not met on the last day of the averaging period, all days in the averaging period are considered out of compliance."

^d Data for Existing Conditions and No Action LLT are for Sacramento River at Emmaton, per the definition of these baselines. Data for the BDCP alternative is for Three Mile Slough, per the description of the alternative.

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1 Table EC-8. Number of days Delta locations exceed Bay-Delta Water Quality Control Plan objectives, and number of days out of compliance, for Alternative 8 LLT.

Location ^a	# of Days Objective Applicable	# of Days Objective Exceeded ^b			% of Days Objective Exceeded ^b			# of Days Out of Compliance ^c			% of Days Out of Compliance ^c		
		Ex. Cond.	No Act. LLT	Alt 8 LLT	Ex. Cond.	No Act. LLT	Alt 8 LLT	Ex. Cond.	No Act. LLT	Alt 8 LLT	Ex. Cond.	No Act. LLT	Alt 8 LLT
Sacramento River at Emmaton / Three Mile Slough nr. Sacramento River (AGR) ^d	2,176	120	<u>297258</u>	<u>5959</u>	6	<u>1412</u>	<u>33</u>	233	<u>540485</u>	<u>159459</u>	11	<u>2522</u>	<u>77</u>
Sacramento River at Emmaton (AGR)	2,176	120	<u>297258</u>	<u>472395</u>	6	<u>1412</u>	<u>2248</u>	233	<u>540485</u>	<u>732603</u>	11	<u>2522</u>	<u>3428</u>
San Joaquin River at Jersey Point (AGR)	2,176	415	<u>299230</u>	<u>175157</u>	19	<u>1411</u>	<u>87</u>	623	<u>566464</u>	<u>383339</u>	29	<u>2621</u>	<u>1816</u>
S. Fork Mokelumne River at Terminous (AGR)	2,176	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>
San Joaquin River at San Andreas Landing (AGR)	2,176	14	<u>1343</u>	<u>84</u>	1	<u>14</u>	<u>00</u>	27	<u>2626</u>	<u>3414</u>	1	<u>14</u>	<u>24</u>
San Joaquin River at Vernalis (AGR)	5,842	163	<u>154454</u>	<u>173473</u>	3	<u>33</u>	<u>33</u>	424	<u>415415</u>	<u>463463</u>	7	<u>77</u>	<u>88</u>
San Joaquin River at Brandt Bridge (AGR)	5,842	188	<u>183483</u>	<u>208208</u>	3	<u>33</u>	<u>44</u>	449	<u>444444</u>	<u>527527</u>	8	<u>88</u>	<u>99</u>
Old River near Middle River (AGR)	5,842	183	<u>177477</u>	<u>195195</u>	3	<u>33</u>	<u>33</u>	444	<u>438438</u>	<u>485485</u>	8	<u>77</u>	<u>88</u>
Old River at Tracy Bridge (AGR)	5,842	250	<u>206206</u>	<u>229229</u>	4	<u>44</u>	<u>44</u>	569	<u>467467</u>	<u>519519</u>	10	<u>88</u>	<u>99</u>
San Joaquin River at Jersey Point (F&W)	671	0	<u>210</u>	<u>00</u>	0	<u>30</u>	<u>00</u>	0	<u>210</u>	<u>00</u>	0	<u>30</u>	<u>00</u>
San Joaquin River at Prisoners Point (F&W)	671	38	<u>1040</u>	<u>279218</u>	6	<u>14</u>	<u>3832</u>	64	<u>1040</u>	<u>279218</u>	10	<u>14</u>	<u>3832</u>

Notes:

^a (AGR) = for the protection of agricultural beneficial uses; (F&W) = for the protection of fish and wildlife beneficial uses.

^b Number of days the Bay-Delta Water Quality Control Plan EC objective was exceeded at the location.

^c Number of days the EC at the location was out of compliance with the Bay-Delta Water Quality Control Plan EC objective. Days out of compliance was determined according to Table 2, footnote 2, which states: "Determination of compliance with an objective expressed as a running average begins on the last day of the averaging period. The averaging period commences with the first day of the time period for the applicable objective. If the objective is not met on the last day of the averaging period, all days in the averaging period are considered out of compliance."

^d Data for Existing Conditions and No Action LLT are for Sacramento River at Emmaton, per the definition of these baselines. Data for the BDCP alternative is for Three Mile Slough, per the description of the alternative.

1 Table EC-9. Number of days Delta locations exceed Bay-Delta Water Quality Control Plan objectives, and number of days out of compliance, for Alternative 9 LLT.

Location ^a	# of Days Objective Applicable	# of Days Objective Exceeded ^b			% of Days Objective Exceeded ^b			# of Days Out of Compliance ^c			% of Days Out of Compliance ^c		
		Ex. Cond.	No Act. LLT	Alt 9 LLT	Ex. Cond.	No Act. LLT	Alt 9 LLT	Ex. Cond.	No Act. LLT	Alt 9 LLT	Ex. Cond.	No Act. LLT	Alt 9 LLT
Sacramento River at Emmaton / Three Mile Slough nr. Sacramento River (AGR) ^d	2,176	120	<u>297258</u>	<u>116114</u>	6	<u>1412</u>	<u>55</u>	233	<u>540485</u>	<u>233244</u>	11	<u>2522</u>	<u>1111</u>
Sacramento River at Emmaton (AGR)	2,176	120	<u>297258</u>	<u>381362</u>	6	<u>1412</u>	<u>1817</u>	233	<u>540485</u>	<u>675617</u>	11	<u>2522</u>	<u>3128</u>
San Joaquin River at Jersey Point (AGR)	2,176	415	<u>299230</u>	<u>9578</u>	19	<u>1411</u>	<u>44</u>	623	<u>566464</u>	<u>160143</u>	29	<u>2621</u>	<u>77</u>
S. Fork Mokelumne River at Terminous (AGR)	2,176	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>	0	<u>00</u>	<u>00</u>
San Joaquin River at San Andreas Landing (AGR)	2,176	14	<u>1343</u>	<u>1824</u>	1	<u>14</u>	<u>14</u>	27	<u>2626</u>	<u>3150</u>	1	<u>14</u>	<u>12</u>
San Joaquin River at Vernalis (AGR)	5,842	163	<u>154454</u>	<u>153153</u>	3	<u>33</u>	<u>33</u>	424	<u>415415</u>	<u>414414</u>	7	<u>77</u>	<u>77</u>
San Joaquin River at Brandt Bridge (AGR)	5,842	188	<u>183483</u>	<u>1646</u>	3	<u>33</u>	<u>00</u>	449	<u>444444</u>	<u>4545</u>	8	<u>88</u>	<u>14</u>
Old River near Middle River (AGR)	5,842	183	<u>177477</u>	<u>130130</u>	3	<u>33</u>	<u>22</u>	444	<u>438438</u>	<u>391391</u>	8	<u>77</u>	<u>77</u>
Old River at Tracy Bridge (AGR)	5,842	250	<u>206206</u>	<u>148148</u>	4	<u>44</u>	<u>33</u>	569	<u>467467</u>	<u>409409</u>	10	<u>88</u>	<u>77</u>
San Joaquin River at Jersey Point (F&W)	671	0	<u>210</u>	<u>180</u>	0	<u>30</u>	<u>20</u>	0	<u>210</u>	<u>180</u>	0	<u>30</u>	<u>20</u>
San Joaquin River at Prisoners Point (F&W)	671	38	<u>1040</u>	<u>00</u>	6	<u>14</u>	<u>00</u>	64	<u>1040</u>	<u>00</u>	10	<u>14</u>	<u>00</u>
Notes:													
^a (AGR) = for the protection of agricultural beneficial uses; (F&W) = for the protection of fish and wildlife beneficial uses.													
^b Number of days the Bay-Delta Water Quality Control Plan EC objective was exceeded at the location.													
^c Number of days the EC at the location was out of compliance with the Bay-Delta Water Quality Control Plan EC objective. Days out of compliance was determined according to Table 2, footnote 2, which states: "Determination of compliance with an objective expressed as a running average begins on the last day of the averaging period. The averaging period commences with the first day of the time period for the applicable objective. If the objective is not met on the last day of the averaging period, all days in the averaging period are considered out of compliance."													
^d Data for Existing Conditions and No Action LLT are for Sacramento River at Emmaton, per the definition of these baselines. Data for the BDCP alternative is for Three Mile Slough, per the description of the alternative.													

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1 Table EC-10: Period average EC levels at Bay-Delta Water Quality Control Plan compliance locations and frequency of exceedance of Bay-Delta Water Quality Control Plan objectives for Banks and Jones pumping plants.

Location		Period ^a	Period Average Electrical Conductivity ($\mu\text{mhos}/\text{cm}$)												Bay-Delta Water Quality Control Plan objective (1000 $\mu\text{mhos}/\text{cm}$) ^b												
															Frequency of Criterion/Objective Exceedance (%)												
			Ex. Cond.	No Act. LLT	Alt 1 LLT	Alt 2 LLT	Alt 3 LLT	Alt 4 LLT H1	Alt 4 LLT H2	Alt 4 LLT H3	Alt 5 LLT	Alt 6 LLT	Alt 7 LLT	Alt 8 LLT	Alt 9 LLT	Ex. Cond.	No Act. LLT	Alt 1 LLT	Alt 2 LLT	Alt 3 LLT	Alt 4 LLT H1-H4	Alt 5 LLT	Alt 6 LLT	Alt 7 LLT	Alt 8 LLT	Alt 9 LLT	
Western Delta	Sac. R. at Emmaton / Three Mile Sl. nr. Sac. River ^c	ALL	1069	1078	778	677	767	759 ₋	768 ₋	679 ₋	679 ₋	695	540	574	603	940	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	1449	1600	1036	983	1008	1019 ₋	1011 ₋	967 ₋	966 ₋	989	776	792	829	1405	-	-	-	-	-	-	-	-	-	-	-
	Sac. R. at Emmaton	ALL	1069	1078	1238	1063	1219	1205	1221	1070	1072	1096	845	887	935	1302	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	1449	1600	1675	1578	1621	1644	1629	1559	1559	1591	1265	1266	1317	1976	-	-	-	-	-	-	-	-	-	-	-
	SJR at Jersey Point	ALL	1135	976	1003	838	997	957	944	831	832	907	498	706	681	761	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	1410	1323	1238	1166	1235	1216	1206	1139	1146	1188	671	913	886	1125	-	-	-	-	-	-	-	-	-	-	-
Interior Delta	S.F. Moke. R. Term.	ALL	203	202	212	213	210	212	213	212	213	210	218	214	214	201	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	209	207	215	217	215	216	217	216	217	215	222	219	218	204	-	-	-	-	-	-	-	-	-	-	-
	SJR at San. And. Landing	ALL	395	376	444	399	444	432	430	397	398	415	316	372	362	457	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	470	468	527	516	531	529	530	502	504	515	367	450	436	625	-	-	-	-	-	-	-	-	-	-	-
Southern Delta	SJR at Vernalis	ALL	581	570	569	570	569	570	569	570	568	569	570	570	571	569	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	718	698	698	698	698	698	698	698	697	698	699	700	702	697	-	-	-	-	-	-	-	-	-	-	-
	SJR at Brandt Bridge	ALL	586	574	574	576	575	576	575	575	574	575	575	576	577	396	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	726	700	708	705	708	705	705	705	704	706	706	710	710	486	-	-	-	-	-	-	-	-	-	-	-
	Old River at Middle River	ALL	586	576	575	579	575	579	578	578	577	576	576	577	577	543	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	726	705	706	709	706	708	709	708	708	706	707	708	709	660	-	-	-	-	-	-	-	-	-	-	-
	Old River at Tracy Bridge	ALL	597	582	584	594	584	593	593	592	591	584	587	586	586	549	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	737	707	715	722	714	721	721	722	722	710	718	717	718	665	-	-	-	-	-	-	-	-	-	-	-
SJR	SJR at Prisoners Pt.	ALL	440	399	436	423	434	436	437	418	424	417	408	438	426	448	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	508	474	492	508	496	509	518	496	504	484	448	513	491	590	-	-	-	-	-	-	-	-	-	-	-
Export Area	Banks PP	ALL	530	493	414	383	433	406	407	390	384	429	176	281	270	231	1	2	0	0	0	0	0	0	0	0	0
		DROUGHT	646	607	526	504	532	511	490	491	472	532	176	315	305	243	2	2	0	0	0	0	0	0	0	0	0
	Jones PP	ALL	555	529	451	401	460	440	420	420	411	470	176	264	259	435	0	0	0	0	0	0	0	0	0	0	0
		DROUGHT	683	652	566	525	549	564	525	537	523	575	176	278	262	559	0	0	0	0	0	0	0	0	0	0	0

Notes:

^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).^b A 1,000 $\mu\text{mhos}/\text{cm}$ objective, as a monthly average of mean daily EC, applies to the Banks and Jones pumping plants year-round. Compliance with EC objectives for other locations in the table is assessed on a different time-step and, thus, is summarized in a separate table in this Appendix.^c Data for Existing Conditions and No Action LLT are for Sacramento River at Emmaton, per the definition of these baselines. Data for the BDCP alternatives 1-3 and 5-9 are for Three Mile Slough, per the description of the these alternatives. Alternative 4 maintains the compliance location at Emmaton, so Threemile Slough data is not shown.

1 Table EC-15A. Period average change in EC levels for Alternative 4-H1 LLT relative to existing conditions and the No Action Alternative LLT.

Electrical Conductivity	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT																									
Alt 4 Scn H1			-424	51	-206	119	57	-25	-65	-131	12	-64	60	3	91	34	197	103	314	173	432	383	622	455	541	422	136	127	
Western Delta	Sac. R. at Emmatton	ALL	(-19%)	(3%)	(-10%)	(7%)	(5%)	(-2%)	(-11%)	(-19%)	(3%)	(-13%)	(22%)	(1%)	(33%)	(10%)	(41%)	(18%)	(38%)	(18%)	(45%)	(38%)	(46%)	(30%)	(25%)	(19%)	(13%)	(12%)	
		DROUGHT	(-27%)	(-11%)	(-11%)	(-2%)	(-3%)	(-12%)	(-12%)	(-11%)	(-12%)	(-35%)	(35%)	(-3%)	(27%)	(5%)	(42%)	(15%)	(80%)	(28%)	(65%)	(20%)	(81%)	(57%)	(45%)	(21%)	(0%)	(-18%)	(13%)
	SJR at Jersey Point	ALL	-684	4	-892	-249	-388	-155	-220	-205	-58	-94	24	-10	39	11	53	6	140	52	-248	-3	17	185	83	234	-178	-19	
		DROUGHT	(-35%)	(0%)	(-40%)	(-16%)	(-23%)	(-11%)	(-26%)	(-24%)	(-13%)	(-19%)	(8%)	(-3%)	(14%)	(4%)	(15%)	(1%)	(26%)	(8%)	(-17%)	(-20%)	(-17%)	(-1%)	(14%)	(4%)	(12%)	(-16%)	(-2%)
Interior Delta	S. Fork Moke. R. Term.	ALL	8	8	9	9	4	5	4	9	6	10	13	15	12	13	9	10	14	15	10	10	11	10	9	8	9	10	
		DROUGHT	(4%)	(5%)	(5%)	(5%)	(2%)	(3%)	(2%)	(4%)	(2%)	(4%)	(6%)	(7%)	(6%)	(7%)	(5%)	(5%)	(7%)	(8%)	(5%)	(5%)	(6%)	(5%)	(5%)	(5%)	(5%)	(5%)	(5%)
	SJR at San And. Landing	ALL	7	8	8	8	4	5	1	5	-2	4	7	13	5	8	8	10	19	20	16	16	10	10	8	8	8	10	
		DROUGHT	(4%)	(4%)	(4%)	(4%)	(2%)	(2%)	(0%)	(2%)	(-1%)	(1%)	(3%)	(5%)	(2%)	(4%)	(4%)	(5%)	(10%)	(10%)	(8%)	(8%)	(6%)	(5%)	(4%)	(4%)	(4%)	(5%)	(5%)
Southern Delta	SJR at Vernalis	ALL	51	119	-95	23	-32	20	-33	-17	5	-3	19	12	24	20	31	21	71	51	55	82	123	151	230	201	37	57	
		DROUGHT	(10%)	(27%)	(-15%)	(5%)	(-5%)	(4%)	(-8%)	(-4%)	(2%)	(-1%)	(8%)	(5%)	(10%)	(9%)	(12%)	(8%)	(29%)	(19%)	(14%)	(23%)	(29%)	(38%)	(44%)	(36%)	(9%)	(15%)	
	SJR at Brandt Bridge	ALL	63	90	-42	35	-5	41	-40	2	47	9	30	21	24	21	51	27	136	74	75	120	163	206	206	76	59	60	
		DROUGHT	(10%)	(15%)	(-6%)	(5%)	(-1%)	(6%)	(-7%)	(0%)	(14%)	(2%)	(12%)	(8%)	(10%)	(9%)	(21%)	(10%)	(54%)	(23%)	(14%)	(25%)	(29%)	(40%)	(32%)	(10%)	(13%)	(13%)	
SJR	Old River at Middle River	ALL	4	0	-35	0	-43	5	-82	1	-10	0	-28	0	-10	0	-5	0	57	0	38	0	8	1	-16	-1	-10	1	
		DROUGHT	(1%)	(0%)	(-6%)	(0%)	(-6%)	(1%)	(-11%)	(0%)	(-2%)	(0%)	(-4%)	(-0%)	(-2%)	(0%)	(-1%)	(0%)	(11%)	(0%)	(7%)	(0%)	(1%)	(0%)	(-3%)	(-0%)	(-2%)	(0%)	
	Old River at Tracy Bridge	ALL	2	0	-33	0	-43	7	-83	-4	-14	0	-28	-1	-12	-5	-5	-1	55	1	35	13	11	9	-14	-1	-11	2	
		DROUGHT	(0%)	(0%)	(-6%)	(0%)	(-6%)	(1%)	(-11%)	(-1%)	(-2%)	(0%)	(-4%)	(-0%)	(-3%)	(-1%)	(-1%)	(-0%)	(10%)	(0%)	(6%)	(2%)	(2%)	(2%)	(-3%)	(-0%)	(-2%)	(0%)	
Export Area	SJR at Prisoners Point	ALL	-3	4	-38	1	-54	0	-58	7	-11	2	-25	2	-3	6	-3	2	54	0	39	3	11	1	-14	-1	-8	3	
		DROUGHT	(-0%)	(1%)	(-6%)	(0%)	(-6%)	(0%)	(-6%)	(1%)	(-1%)	(0%)	(-2%)	(-0%)	(-1%)	(-2%)	(-0%)	(-1%)	(0%)	(-1%)	(1%)	(-1%)	(0%)	(-3%)	(-0%)	(-2%)	(0%)	(0%)	
	Banks PP	ALL	16	23	-20	7	-46	3	-55	25	-6	12	-17	10	21	31	3	9	41	-7	33	2	5	11	-13	8	-3	11	
		DROUGHT	(3%)	(4%)	(-4%)	(1%)	(-6%)	(0%)	(-7%)	(4%)	(-1%)	(2%)	(-3%)	(2%)	(4%)	(7%)	(1%)	(2%)	(8%)	(-1%)	(6%)	(0%)	(1%)	(2%)	(-2%)	(1%)	(-1%)	(2%)	
Jones PP	ALL	ALL	-22	39	-154	-28	-113	-28	-51	-12	24	38	50	61	47	67	37	46	57	58	-12	33	13	75	74	90	-4	37	
		DROUGHT	(-4%)	(9%)	(-26%)	(-6%)	(-18%)	(-5%)	(-10%)	(-3%)	(6%)	(10%)	(15%)	(19%)	(14%)	(21%)	(12%)	(15%)	(20%)	(20%)	(-3%)	(9%)	(3%)	(19%)	(14%)	(18%)	(-1%)	(9%)	
	DROUGHT	ALL	-53	-13	-173	-53	-198	-104	-230	-179	-158	-148	-190	-183	-153	-144	-40	-37	-50	-69	-78	-58	-113	-41	-46	-8	-124	-87	
		DROUGHT	(-9%)	(-2%)	(-27%)	(-10%)	(-29%)	(-18%)	(-35%)	(-29%)	(-28%)	(-40%)	(-39%)	(-33%)	(-32%)	(-9%)	(-9%)	(-13%)	(-17%)	(-18%)	(-14%)	(-21%)	(-9%)	(-8%)	(-2%)	(-23%)	(-18%)		
2 3 4	ALL	ALL	-6	8	-126	-40	-200	-108	-285	-220	-201	-180	-287	-275	-220	-212	-78	-78	48	8	-109	-71	-159	-24	16	51	-134	-95	
		DROUGHT	(-1%)	(1%)	(-18%)	(-6%)	(-25%)	(-15%)	(-37%)	(-31%)	(-28%)	(-45%)	(-44%)	(-35%)	(-34%)	(-14%)	(-11%)	(-2%)	(-21%)	(-14%)	(-22%)	(-4%)	(3%)	(8%)	(-21%)	(-16%)			
	DROUGHT	ALL	-89	-63	-169	-65	-128	-47	-190	-131	-153	-147	-173	-165	-100	-96	-97	-93	-85	-132	-53	-58	-37	13	-103	-75	-115	-88	
		DROUGHT	(-16%)	(-12%)	(-27%)	(-12%)	(-18%)	(-8%)																					

Electrical Conductivity		Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change	
Alt 4 Scn H1	Location		Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT		
Sac. R. at Emmaton/Threemile Sl. Nr. Sac. R.	ALL	-1109 (-51%)	-634 (-37%)	-927 (-44%)	-602 (-34%)	-416 (-33%)	-498 (-37%)	-210 (-34%)	-277 (-41%)	-92 (-23%)	-169 (-35%)	-10 (-4%)	-67 (-20%)	0 (-0%)	-57 (-17%)	-36 (-8%)	-130 (-23%)	-121 (-15%)	-262 (-27%)	-115 (-12%)	-164 (-16%)	-175 (-13%)	-342 (-23%)	-506 (-24%)	-625 (-28%)	-310 (-29%)	-319 (-30%)	
Western Delta	DROUGHT	-1609 (-55%)	-1082 (-45%)	-1303 (-45%)	-1026 (-39%)	-735 (-38%)	-925 (-44%)	-225 (-26%)	-444 (-41%)	-63 (-11%)	-284 (-11%)	-19 (-37%)	-84 (-6%)	-1 (-22%)	-69 (-0%)	-69 (-19%)	56 (10%)	-182 (-22%)	-17 (-2%)	-411 (-29%)	119 (9%)	-88 (-6%)	-227 (-13%)	-561 (-27%)	-1140 (-39%)	-1817 (-50%)	-430 (-30%)	-581 (-36%)
	Sac. R. at Emmaton	ALL	-424 (-19%)	51 (3%)	-206 (-10%)	119 (7%)	57 (5%)	-25 (-2%)	-65 (-11%)	-131 (-19%)	12 (3%)	-64 (-13%)	60 (22%)	3 (1%)	91 (33%)	34 (10%)	197 (41%)	103 (18%)	314 (38%)	173 (18%)	432 (45%)	383 (38%)	622 (46%)	455 (30%)	541 (25%)	422 (19%)	136 (13%)	127 (12%)
	DROUGHT	-784 (-27%)	-257 (-11%)	-321 (-11%)	-44 (-2%)	-64 (-3%)	-254 (-12%)	94 (11%)	-125 (-12%)	195 (35%)	-26 (-3%)	-87 (27%)	21 (5%)	124 (42%)	56 (15%)	471 (80%)	233 (28%)	676 (65%)	282 (20%)	1083 (81%)	876 (57%)	774 (45%)	441 (21%)	10 (0%)	-667 (-18%)	195 (13%)	45 (3%)	
	SJR at Jersey Point	ALL	-684 (-35%)	4 (0%)	-892 (-40%)	-249 (-16%)	-388 (-23%)	-155 (-11%)	-220 (-26%)	-205 (-24%)	-58 (-13%)	-94 (-19%)	24 (8%)	-10 (-3%)	39 (14%)	11 (4%)	53 (15%)	6 (1%)	140 (26%)	52 (8%)	-248 (-17%)	-3 (-0%)	17 (1%)	185 (14%)	83 (4%)	234 (12%)	-178 (-16%)	-19 (-2%)
	DROUGHT	-780 (-34%)	-168 (-10%)	-851 (-33%)	-321 (-16%)	-542 (-25%)	-204 (-11%)	-243 (-22%)	-261 (-23%)	26 (5%)	-104 (-15%)	47 (15%)	6 (2%)	50 (18%)	18 (6%)	151 (38%)	19 (4%)	329 (49%)	68 (7%)	-414 (-19%)	28 (6%)	257 (-6%)	-129 (1%)	-482 (-15%)	-194 (-17%)	-108 (-8%)		
	S. Fork Moke. R. Term.	ALL	8 (4%)	8 (5%)	9 (5%)	9 (2%)	4 (3%)	5 (2%)	4 (2%)	9 (4%)	6 (2%)	10 (4%)	13 (6%)	15 (7%)	12 (6%)	13 (7%)	9 (5%)	10 (5%)	14 (7%)	15 (8%)	10 (5%)	10 (5%)	11 (5%)	10 (5%)	9 (5%)	8 (5%)	9 (5%)	10 (5%)
	DROUGHT	7 (4%)	8 (4%)	8 (4%)	4 (2%)	5 (2%)	1 (0%)	5 (0%)	-2 (2%)	4 (-1%)	7 (1%)	13 (3%)	5 (5%)	8 (2%)	8 (4%)	10 (4%)	10 (5%)	19 (10%)	20 (8%)	16 (8%)	16 (6%)	10 (5%)	10 (4%)	10 (4%)	8 (4%)	8 (4%)	10 (5%)	
	SJR at San And. Landing	ALL	51 (10%)	119 (27%)	-95 (-15%)	23 (5%)	-32 (-5%)	20 (4%)	-33 (-6%)	-17 (0%)	5 (-8%)	-3 (-4%)	19 (2%)	12 (-1%)	24 (8%)	20 (9%)	31 (10%)	21 (9%)	71 (12%)	51 (8%)	55 (29%)	82 (19%)	123 (14%)	151 (23%)	230 (29%)	201 (38%)	37 (44%)	57 (36%)
	DROUGHT	63 (10%)	90 (15%)	-42 (-6%)	35 (5%)	-5 (-1%)	41 (6%)	-40 (-7%)	2 (0%)	47 (14%)	9 (2%)	30 (12%)	21 (8%)	24 (10%)	21 (9%)	51 (21%)	27 (10%)	136 (54%)	74 (23%)	75 (14%)	120 (25%)	163 (29%)	206 (40%)	76 (32%)	59 (10%)	60 (13%)		
Southern Delta	SJR at Vernalis	ALL	4 (1%)	0 (0%)	-35 (-6%)	0 (0%)	-43 (-6%)	5 (1%)	-82 (-11%)	1 (0%)	-10 (-2%)	0 (0%)	-28 (-4%)	0 (-0%)	-10 (-2%)	0 (0%)	-5 (-1%)	0 (0%)	57 (11%)	0 (0%)	38 (10%)	0 (8%)	8 (7%)	1 (0%)	-16 (-3%)	-1 (-0%)	-10 (-2%)	1 (0%)
	DROUGHT	-6 (-1%)	0 (0%)	-41 (-6%)	0 (0%)	-53 (-6%)	0 (0%)	-66 (-7%)	0 (-0%)	-9 (-1%)	0 (-0%)	-19 (-2%)	0 (0%)	-4 (-1%)	0 (0%)	-9 (-2%)	0 (0%)	-9 (-1%)	0 (0%)	-5 (-1%)	0 (0%)	-5 (-1%)	0 (0%)	-7 (-1%)	0 (0%)	-19 (-3%)	-3 (-2%)	0 (0%)
	SJR at Brandt Bridge	ALL	2 (0%)	0 (0%)	-33 (-6%)	0 (0%)	-43 (-6%)	7 (1%)	-83 (-11%)	-4 (-1%)	-14 (-2%)	0 (0%)	-28 (-4%)	-1 (-0%)	-12 (-3%)	-5 (-1%)	-5 (-1%)	-1 (-0%)	55 (10%)	1 (0%)	35 (6%)	13 (2%)	11 (2%)	9 (2%)	-14 (-3%)	-1 (-0%)	-11 (-2%)	2 (0%)
	DROUGHT	-7 (-1%)	0 (-0%)	-39 (-6%)	0 (0%)	-53 (-6%)	4 (0%)	-67 (-7%)	-3 (-0%)	-13 (-1%)	2 (0%)	-19 (-2%)	-2 (-0%)	-7 (-1%)	-11 (-2%)	-9 (-2%)	-9 (-1%)	-2 (-0%)	80 (-2%)	0 (-2%)	-16 (-7%)	44 (-7%)	-7 (-5%)	33 (-5%)	-17 (-3%)	-3 (-3%)	-22 (-3%)	5 (1%)
	Old River at Middle River	ALL	7 (1%)	6 (1%)	-32 (-6%)	1 (0%)	-43 (-6%)	5 (1%)	-73 (-10%)	7 (1%)	-11 (-2%)	2 (0%)	-25 (-4%)	2 (0%)	-3 (-1%)	6 (1%)	-3 (-1%)	2 (-1%)	54 (10%)	0 (0%)	39 (7%)	3 (0%)	11 (2%)	1 (0%)	-14 (-3%)	-1 (-0%)	-8 (-1%)	3 (0%)
	DROUGHT	-3 (-0%)	4 (1%)	-38 (-6%)	1 (0%)	-54 (-6%)	0 (0%)	-58 (-6%)	7 (1%)	-11 (-1%)	2 (0%)	-14 (-2%)	4 (0%)	10 (1%)	10 (2%)	-5 (-1%)	3 (0%)	-8 (-1%)	0 (0%)	-4 (-1%)	8 (1%)	-6 (-1%)	2 (0%)	-18 (-3%)	-3 (-3%)	-17 (-2%)	3 (0%)	
	Old River at Tracy Bridge	ALL	16 (3%)	23 (4%)	-20 (-4%)	7 (1%)	-46 (-4%)	3 (0%)	-55 (-7%)	25 (4%)	-6 (-1%)	12 (0%)	-17 (-2%)	10 (-0%)	21 (-2%)	31 (-3%)	3 (-1%)	9 (-1%)	41 (-2%)	-7 (-0%)	33 (-2%)	2 (-1%)	5 (-1%)	11 (-1%)	-13 (-1%)	8 (-1%)	-3 (-1%)	11 (-2%)
	DROUGHT	10 (2%)	18 (3%)	-25 (-4%)	13 (2%)	-56 (-7%)	-1 (-0%)	-49 (-5%)	15 (2%)	-15 (-2%)	3 (0%)	-180 (-0%)	-201 (-2%)	-180 (-0%)	-287 (-2%)	-275 (-2%)	-220 (-2%)	-212 (-2%)	-78 (-2%)	48 (-2%)	8 (-2%)	-109 (-2%)	-71 (-2%)	-159 (-2%)	-24 (-2%)	-17 (-2%)	13 (-2%)	
SJR	SJR at Prisoners Point	ALL	-22 (-4%)	39<br																								

1 Table EC-15B. Period average change in EC levels for Alternative 4-H2 LLT relative to existing conditions and the No Action Alternative LLT.

Electrical Conductivity	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change					
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT				
Alt 4 LLT Scn H2			-450 (-21%)	25 (1%)	-199 (-9%)	125 (7%)	185 (15%)	103 (8%)	-87 (-14%)	-153 (-23%)	-1 (-0%)	-78 (-16%)	52 (19%)	-4 (-1%)	82 (30%)	25 (7%)	175 (37%)	82 (14%)	319 (39%)	178 (19%)	518 (54%)	470 (47%)	654 (49%)	487 (32%)	584 (27%)	465 (21%)	153 (14%)	144 (13%)				
Western Delta	Sac. R. at Emmaton	ALL	-450 (-21%)	25 (1%)	-199 (-9%)	125 (7%)	185 (15%)	103 (8%)	-87 (-14%)	-153 (-23%)	-1 (-0%)	-78 (-16%)	52 (19%)	-4 (-1%)	82 (30%)	25 (7%)	175 (37%)	82 (14%)	319 (39%)	178 (19%)	518 (54%)	470 (47%)	654 (49%)	487 (32%)	584 (27%)	465 (21%)	153 (14%)	144 (13%)				
		DROUGHT	-1092 (-37%)	-565 (-24%)	-493 (-17%)	-217 (-8%)	373 (20%)	183 (9%)	-7 (-1%)	-227 (-21%)	141 (26%)	-80 (-10%)	91 (29%)	26 (7%)	123 (42%)	55 (15%)	458 (78%)	220 (27%)	691 (67%)	297 (21%)	1108 (83%)	901 (59%)	820 (47%)	487 (24%)	-46 (-2%)	-724 (-20%)	181 (12%)	30 (2%)				
	SJR at Jersey Point	ALL	-689 (-35%)	-1 (-0%)	-876 (-40%)	-233 (-15%)	-410 (-25%)	-177 (-12%)	-238 (-28%)	-223 (-26%)	-67 (-15%)	-103 (-21%)	22 (-21%)	-12 (-21%)	37 (-15%)	9 (2%)	50 (18%)	3 (6%)	124 (36%)	37 (2%)	3 (46%)	145 (5%)	13 (-16%)	305 (-3%)	43 (2%)	-295 (16%)	-51 (-6%)	-4 (-18%)	164 (-14%)	49 (-9%)	200 (-17%)	-32 (-3%)
		DROUGHT	-922 (-40%)	-310 (-18%)	-933 (-36%)	-403 (-20%)	-450 (-6%)	-112 (-20%)	-230 (-21%)	-248 (-22%)	-10 (-2%)	-140 (-21%)	48 (-15%)	7 (2%)	51 (18%)	19 (6%)	145 (36%)	13 (2%)	305 (2%)	43 (5%)	-348 (-16%)	-52 (-3%)	41 (2%)	270 (16%)	-145 (-6%)	-498 (-18%)	-204 (-14%)	-117 (-9%)				
Interior Delta	S. Fork Moke. R. Term.	ALL	8 (4%)	9 (5%)	9 (5%)	9 (4%)	6 (3%)	7 (3%)	5 (2%)	10 (4%)	6 (3%)	11 (4%)	13 (6%)	15 (7%)	12 (6%)	13 (6%)	9 (5%)	10 (5%)	15 (8%)	16 (9%)	12 (6%)	13 (7%)	11 (6%)	10 (5%)	9 (5%)	9 (5%)	10 (5%)	11 (5%)				
		DROUGHT	7 (4%)	7 (4%)	9 (4%)	9 (4%)	6 (3%)	7 (4%)	1 (0%)	5 (2%)	-2 (-1%)	3 (1%)	9 (4%)	14 (6%)	7 (3%)	10 (5%)	9 (5%)	11 (6%)	20 (10%)	21 (11%)	15 (8%)	15 (8%)	11 (6%)	10 (5%)	7 (4%)	8 (4%)	8 (4%)	10 (5%)				
	SJR at San And. Landing	ALL	56 (11%)	124 (28%)	-91 (-15%)	27 (5%)	-29 (-5%)	24 (4%)	-38 (-9%)	-22 (-5%)	5 (2%)	-3 (-1%)	21 (9%)	14 (6%)	28 (12%)	24 (10%)	34 (14%)	24 (9%)	74 (30%)	53 (20%)	41 (11%)	68 (19%)	107 (25%)	135 (34%)	218 (42%)	188 (34%)	35 (9%)	55 (15%)				
		DROUGHT	22 (4%)	49 (8%)	-76 (-11%)	1 (0%)	26 (4%)	72 (11%)	-24 (-4%)	18 (-4%)	40 (0%)	1 (-1%)	34 (14%)	26 (10%)	41 (17%)	38 (16%)	65 (16%)	41 (26%)	41 (15%)	136 (54%)	73 (23%)	86 (16%)	130 (27%)	185 (33%)	229 (45%)	190 (30%)	60 (8%)	62 (13%)				
	SJR at Vernalis	ALL	3 (1%)	0 (0%)	-35 (-6%)	0 (-6%)	-48 (-6%)	0 (0%)	-85 (-11%)	-2 (-0%)	-11 (-2%)	0 (-0%)	-28 (-4%)	0 (-0%)	-10 (-2%)	0 (-0%)	-5 (-1%)	0 (0%)	57 (11%)	1 (0%)	38 (7%)	1 (0%)	9 (2%)	1 (0%)	-16 (-3%)	-1 (-0%)	-11 (-2%)	0 (-0%)				
		DROUGHT	-6 (-1%)	0 (0%)	-41 (-6%)	0 (0%)	-53 (-6%)	0 (0%)	-66 (-7%)	0 (0%)	-9 (-1%)	0 (-0%)	-19 (-2%)	0 (-0%)	-4 (-1%)	0 (-0%)	-9 (-2%)	0 (-0%)	-7 (-1%)	1 (0%)	-3 (-1%)	2 (-1%)	-5 (-1%)	2 (0%)	-19 (-3%)	-4 (-1%)	-20 (-3%)	0 (0%)				
	SJR at Brandt Bridge	ALL	1 (0%)	0 (-0%)	-33 (-6%)	0 (0%)	-47 (-6%)	4 (0%)	-86 (-11%)	-7 (-1%)	-14 (-2%)	0 (-0%)	-28 (-4%)	-1 (-0%)	-12 (-3%)	-5 (-1%)	-6 (-1%)	-1 (-0%)	55 (10%)	1 (0%)	36 (6%)	14 (2%)	12 (2%)	10 (2%)	-14 (-3%)	-1 (-0%)	-11 (-2%)	1 (0%)				
		DROUGHT	-7 (-1%)	0 (0%)	-39 (-6%)	0 (0%)	-51 (-6%)	5 (1%)	-67 (-7%)	-3 (-1%)	-13 (-2%)	2 (0%)	-19 (-0%)	-2 (-0%)	-7 (-2%)	-12 (-2%)	-9 (-0%)	-2 (-0%)	-7 (-1%)	1 (0%)	-12 (-1%)	47 (-1%)	-5 (-0%)	34 (-2%)	-17 (-1%)	-3 (-0%)	-21 (-3%)	6 (1%)				
	Old River at Middle River	ALL	6 (1%)	5 (1%)	-32 (-6%)	0 (0%)	-48 (-6%)	0 (0%)	-77 (-10%)	4 (1%)	-12 (-2%)	2 (0%)	-25 (-4%)	2 (0%)	-3 (-1%)	6 (1%)	-3 (0%)	2 (0%)	54 (10%)	0 (0%)	39 (7%)	3 (0%)	11 (2%)	2 (0%)	-15 (-3%)	-1 (-0%)	-9 (-1%)	2 (0%)				
		DROUGHT	-3 (-0%)	4 (1%)	-38 (-6%)	1 (0%)	-54 (-6%)	0 (0%)	-58 (-6%)	7 (1%)	-11 (-1%)	2 (0%)	-14 (-1%)	4 (0%)	11 (2%)	11 (11%)	-5 (1%)	3 (0%)	-7 (-1%)	1 (0%)	-2 (-0%)	9 (8%)	-4 (-1%)	4 (6%)	-18 (-3%)	-3 (-0%)	-17 (-2%)	4 (1%)				
	Old River at Tracy Bridge	ALL	15 (3%)	22 (4%)	-20 (-4%)	7 (1%)	-50 (-7%)	-1 (-0%)	-59 (-8%)	21 (3%)	-7 (-1%)	11 (2%)	-17 (-2%)	11 (0%)	25 (5%)	35 (8%)	3 (1%)	9 (2%)	44 (9%)	-3 (-1%)	34 (6%)	4 (2%)	2 (0%)	-17 (-3%)	4 (1%)	-4 (-1%)	10 (2%)					
		DROUGHT	7 (1%)	15 (2%)	-28 (-4%)	10 (2%)	-56 (-7%)	-1 (-0%)	-49 (-5%)	16 (2%)	-15 (-2%)	2 (0%)	-17 (-0%)	0 (-0%)	17 (2%)	69 (5%)	69 (11%)	5 (1%)	13 (2%)	-20 (-3%)	10 (2%)	-30 (-5%)	3 (0%)	-44 (-6%)	9 (1%)	-30 (-4%)	5 (1%)	-16 (-2%)	14 (2%)			
SJR	SJR at Prisoners Point	ALL	-16 (-3%)	45 (10%)	-151 (-25%)	-25 (-5%)	-124 (-20%)	-38 (-7%)	-61 (-12%)	-22 (-5%)	31 (8%)	45 (12%)	61 (18%)	72 (22%)	64 (19%)	84 (27%)																

Electrical Conductivity	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change	
			Ex. Cond.	No Act. LLT																								
Alt 4 LLT Scn H2			-1124	-649	-920	-596	-341	-422	-227	-294	-101	-177	-13	-69	-4	-61	-46	-140	-116	-257	-71	-119	-161	-328	-485	-605	-301	-310
Western Delta	Sac. R. at Emmaton/ Threemile Sl. Nr. Sac. R.	ALL	(-52%)	(-38%)	(-44%)	(-34%)	(-27%)	(-32%)	(-37%)	(-43%)	(-25%)	(-37%)	(-5%)	(-21%)	(-1%)	(-18%)	(-10%)	(-24%)	(-14%)	(-27%)	(-7%)	(-12%)	(-12%)	(-22%)	(-23%)	(-27%)	(-28%)	(-29%)
		DROUGHT	-1798	-1271	-1411	-1135	-473	-664	-287	-506	-96	-317	-14	-80	2	-66	51	-187	-8	-402	146	-61	-197	-530	-1171	-1849	-438	-589
	Sac. R. at Emmaton	ALL	-450	25	-199	125	185	103	-87	-153	-1	-78	52	-4	82	25	175	82	319	178	518	470	654	487	584	465	153	144
		DROUGHT	-1092	-565	-493	-217	373	183	-7	-227	141	-80	91	26	123	55	458	220	691	297	1108	901	820	487	-46	-724	181	30
	SJR at Jersey Point	ALL	-689	-1	-876	-233	-410	-177	-238	-223	-67	-103	22	-12	37	9	50	3	124	37	-295	-51	-4	164	49	200	-192	-32
		DROUGHT	-922	-310	-933	-403	-450	-112	-230	-248	-10	-140	48	7	51	19	145	13	305	43	-348	-52	41	270	-145	-498	-204	-117
Interior Delta	S. Fork Moke. R. Term.	ALL	8	9	9	9	6	7	5	10	6	11	13	15	12	13	9	10	15	16	12	13	11	10	9	9	10	11
		DROUGHT	7	7	9	9	6	7	1	5	-2	3	9	14	7	10	9	11	20	21	15	15	11	10	7	8	8	10
	SJR at San And. Landing	ALL	.56	124	-91	27	-29	24	-38	-22	5	-3	21	14	28	24	34	24	74	53	41	68	107	135	218	188	35	55
		DROUGHT	22	49	-76	1	26	72	-24	18	40	1	34	26	41	38	65	41	136	73	86	130	185	229	190	60	62	
	SJR at Vernalis	ALL	3	0	-35	0	-48	0	-85	-2	-11	0	-28	0	-10	0	-5	0	57	1	38	1	9	1	-16	-1	-11	0
		DROUGHT	-6	0	-41	0	-53	0	-66	0	-9	0	-19	0	-4	0	-9	0	-7	1	-3	2	-5	2	-19	-4	-20	0
	SJR at Brandt Bridge	ALL	1	0	-33	0	-47	4	-86	-7	-14	0	-28	-1	-12	-5	-6	-1	55	1	36	14	12	10	-14	-1	-11	1
		DROUGHT	-7	0	-39	0	-51	5	-67	-3	-13	2	-19	-2	-7	-12	-9	-2	-7	1	-12	47	-5	34	-17	-3	-21	6
Southern Delta	Old River at Middle River	ALL	6	5	-32	0	-48	0	-77	4	-12	2	-25	2	-3	6	-3	2	54	0	39	3	11	2	-15	-1	-9	2
		DROUGHT	-3	4	-38	1	-54	0	-58	7	-11	2	-14	4	11	11	-5	3	-7	1	-2	9	-4	4	-18	-3	-17	4
	Old River at Tracy Bridge	ALL	15	22	-20	7	-50	-1	-59	21	-7	11	-17	11	25	35	3	9	44	-3	34	4	2	8	-17	4	-4	10
		DROUGHT	7	15	-28	10	-56	-1	-49	16	-15	2	0	17	69	69	5	13	-20	10	-30	3	-44	9	-30	5	-16	14
	SJR at Prisoners Point	ALL	-16	45	-151	-25	-124	-38	-61	-22	31	45	61	72	64	84	47	55	67	68	-9	36	-4	58	60	76	-3	38
		DROUGHT	-36	-9	-139	-45	-129	-40	-84	-8	43	47	105	123	123	144	97	95	105	63	-49	14	11	115	70	33	10	44
Export Area	Banks PP	ALL	-40	0	-170	-50	-206	-112	-232	-181	-158	-149	-142	-135	-176	-167	-80	-77	-78	-98	-58	-39	-99	-26	-44	-6	-122	-85
		DROUGHT	-38	-23	-146	-59	-277	-185	-222	-158	-179	-159	-224	-212	-303	-294	-208	-208	-36	-76	-105	-67	-105	30	-28	7	-156	-117
	Jones PP	ALL	-108	-83	-188	-84	-190	-109	-213	-154	-209	-203	-228	-220	-131	-127	-72	-68	-38	-85	-70	-75	-68	-17	-101	-73	-135	-108
		DROUGHT	-132	-141	-166	-85	-159	-86	-259	-179	-284	-270	-340	-332	-205	-209	-102	-97	12	-28	-126	-94	-92	18	-40	-22	-158	-127

^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

1 Table EC-15C. Period average change in EC levels for Alternative 4-H3 LLT relative to existing conditions and the No Action Alternative LLT.

Electrical Conductivity	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change	
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT		
Alt 4 Scn H3			-813 (-37%)	-338 (-20%)	-532 (-25%)	-207 (-12%)	-163 (-13%)	-244 (-18%)	-122 (-20%)	-189 (-28%)	8 (2%)	-68 (-14%)	68 (25%)	12 (4%)	94 (34%)	38 (11%)	194 (41%)	101 (18%)	319 (39%)	178 (19%)	456 (47%)	407 (40%)	667 (50%)	500 (33%)	-157 (-7%)	-276 (-12%)	2 (0%)	-7 (-1%)
Western Delta	Sac. R. at Emmatton	ALL	-1098 (-38%)	-571 (-24%)	-687 (-24%)	-411 (-16%)	-290 (-15%)	-480 (-23%)	-111 (-13%)	-330 (-31%)	129 (23%)	-92 (-12%)	94 (30%)	28 (7%)	131 (44%)	62 (17%)	485 (83%)	247 (30%)	709 (69%)	315 (22%)	1070 (80%)	863 (56%)	841 (48%)	508 (25%)	49 (2%)	-628 (-17%)	110 (8%)	-41 (-3%)
		DROUGHT	-994 (-44%)	-306 (-24%)	-1101 (-24%)	-458 (-29%)	-682 (-41%)	-448 (-31%)	-328 (-38%)	-313 (-37%)	-82 (-18%)	-118 (-24%)	24 (8%)	-10 (-3%)	38 (14%)	10 (3%)	55 (15%)	8 (2%)	139 (25%)	52 (8%)	-251 (-18%)	-6 (-1%)	10 (1%)	179 (13%)	-476 (-23%)	-325 (-17%)	-304 (-27%)	-145 (-15%)
		ALL	-1022 (-44%)	-410 (-24%)	-1073 (-24%)	-543 (-27%)	-805 (-25%)	-467 (-36%)	-399 (-37%)	-417 (-10%)	-52 (-27%)	-182 (-13%)	42 (0%)	1 (17%)	47 (5%)	15 (40%)	160 (5%)	28 (51%)	343 (9%)	82 (-19%)	-420 (-7%)	8 (0%)	237 (14%)	-76 (-3%)	-429 (-15%)	-271 (-19%)	-184 (-14%)	
		DROUGHT	9 (5%)	9 (5%)	10 (5%)	9 (5%)	5 (2%)	6 (3%)	5 (4%)	10 (2%)	6 (4%)	10 (6%)	13 (7%)	15 (6%)	13 (7%)	14 (5%)	9 (5%)	10 (7%)	14 (8%)	15 (5%)	10 (6%)	11 (5%)	10 (5%)	8 (4%)	7 (4%)	9 (5%)	11 (5%)	
	S. Fork Moke. R. Term.	ALL	8 (4%)	8 (4%)	8 (4%)	8 (4%)	3 (2%)	4 (2%)	1 (0%)	5 (2%)	-2 (-1%)	3 (1%)	9 (4%)	14 (6%)	6 (3%)	9 (4%)	8 (4%)	10 (5%)	19 (10%)	20 (10%)	16 (8%)	16 (6%)	11 (6%)	10 (4%)	8 (5%)	9 (4%)	10 (5%)	
		DROUGHT	-39 (4%)	29 (4%)	-139 (4%)	-20 (4%)	-120 (4%)	-67 (2%)	-83 (0%)	-67 (2%)	-8 (-1%)	-16 (1%)	18 (4%)	11 (6%)	25 (3%)	22 (4%)	32 (5%)	22 (5%)	71 (10%)	51 (10%)	55 (8%)	82 (6%)	123 (6%)	152 (4%)	85 (5%)	55 (4%)	2 (5%)	10 (5%)
		ALL	-26 (-4%)	0 (0%)	-105 (-15%)	-28 (-14%)	-103 (-14%)	-57 (-8%)	-99 (-18%)	-57 (-11%)	14 (4%)	-24 (-7%)	26 (11%)	18 (8%)	27 (11%)	25 (10%)	56 (23%)	32 (12%)	141 (56%)	78 (25%)	73 (14%)	118 (23%)	163 (29%)	207 (38%)	219 (16%)	89 (10%)	32 (6%)	33 (7%)
		DROUGHT	3 (1%)	0 (0%)	-35 (-6%)	0 (0%)	-48 (-6%)	0 (0%)	-82 (-11%)	1 (0%)	-10 (-2%)	0 (0%)	-28 (-4%)	0 (0%)	-10 (-2%)	0 (0%)	-5 (-1%)	0 (0%)	56 (11%)	0 (0%)	38 (7%)	0 (0%)	7 (1%)	0 (0%)	-16 (-3%)	-1 (-0%)	-11 (-2%)	0 (0%)
Interior Delta	SJR at San And. Landing	ALL	-39 (-8%)	29 (6%)	-139 (-22%)	-20 (-20%)	-120 (-12%)	-67 (-20%)	-83 (-16%)	-67 (-3%)	-8 (-5%)	-16 (-4%)	18 (8%)	11 (4%)	25 (11%)	22 (9%)	32 (13%)	22 (9%)	71 (29%)	51 (19%)	55 (14%)	82 (23%)	123 (29%)	152 (38%)	85 (16%)	55 (10%)	2 (6%)	21 (6%)
		DROUGHT	-26 (-4%)	0 (0%)	-105 (-15%)	-28 (-14%)	-103 (-14%)	-57 (-8%)	-99 (-18%)	-57 (-11%)	14 (4%)	-24 (-7%)	26 (11%)	18 (8%)	27 (11%)	25 (10%)	56 (23%)	32 (12%)	141 (56%)	78 (25%)	73 (14%)	118 (23%)	163 (29%)	207 (40%)	219 (34%)	89 (12%)	32 (7%)	33 (7%)
		ALL	3 (1%)	0 (0%)	-35 (-6%)	0 (0%)	-48 (-6%)	0 (0%)	-82 (-11%)	1 (0%)	-10 (-2%)	0 (0%)	-28 (-4%)	0 (0%)	-10 (-2%)	0 (0%)	-5 (-1%)	0 (0%)	56 (11%)	0 (0%)	38 (7%)	0 (0%)	7 (1%)	0 (0%)	-16 (-3%)	-1 (-0%)	-11 (-2%)	0 (0%)
		DROUGHT	-6 (-1%)	0 (0%)	-41 (-6%)	0 (0%)	-53 (-6%)	0 (0%)	-66 (-11%)	0 (0%)	-9 (-1%)	0 (-0%)	-19 (-2%)	0 (-2%)	-4 (-1%)	0 (0%)	-9 (-2%)	0 (0%)	-9 (-1%)	0 (0%)	-5 (-1%)	0 (0%)	-7 (-1%)	0 (0%)	-17 (-2%)	-2 (-1%)	-21 (-2%)	0 (0%)
	SJR at Vernalis	ALL	1 (0%)	0 (0%)	-33 (-6%)	0 (0%)	-47 (-6%)	3 (0%)	-83 (-11%)	-4 (-1%)	-14 (-2%)	0 (0%)	-28 (-4%)	-1 (-0%)	-12 (-1%)	-5 (-1%)	-6 (-1%)	-1 (-0%)	55 (10%)	0 (0%)	36 (6%)	13 (2%)	11 (2%)	9 (2%)	-14 (-2%)	0 (-1%)	-11 (-1%)	1 (0%)
		DROUGHT	-7 (-1%)	0 (0%)	-41 (-6%)	0 (0%)	-53 (-6%)	3 (0%)	-67 (-7%)	-3 (-1%)	-13 (-1%)	2 (0%)	-19 (-2%)	-2 (-0%)	-7 (-1%)	-12 (-2%)	-9 (-0%)	-2 (-0%)	-8 (-1%)	0 (-0%)	-14 (-1%)	45 (-0%)	-7 (-1%)	33 (-1%)	-16 (-1%)	-1 (-0%)	-22 (-2%)	5 (0%)
		ALL	1 (0%)	0 (0%)	-33 (-6%)	0 (0%)	-47 (-6%)	3 (0%)	-83 (-11%)	-4 (-1%)	-14 (-2%)	0 (0%)	-28 (-4%)	-1 (-0%)	-12 (-1%)	-5 (-1%)	-6 (-1%)	-1 (-0%)	55 (10%)	0 (0%)	36 (6%)	13 (2%)	11 (2%)	9 (2%)	-14 (-2%)	0 (-1%)	-11 (-1%)	1 (0%)
		DROUGHT	-7 (-1%)	0 (0%)	-39 (-6%)	0 (0%)	-53 (-6%)	3 (0%)	-67 (-7%)	-3 (-1%)	-13 (-1%)	2 (0%)	-19 (-2%)	-2 (-0%)	-7 (-1%)	-12 (-2%)	-9 (-0%)	-2 (-0%)	-8 (-1%)	0 (-0%)	-14 (-1%)	45 (-2%)	-7 (-1%)	33 (-1%)	-16 (-1%)	-1 (-0%)	-22 (-2%)	5 (0%)
	Old River at Middle River	ALL	6 (1%)	5 (1%)	-32 (-6%)	1 (0%)	-48 (-6%)	0 (0%)	-74 (-10%)	7 (1%)	-11 (-2%)	2 (0%)	-25 (-4%)	2 (0%)	-3 (-1%)	6 (1%)	-3 (-1%)	2 (0%)	54 (10%)	0 (-0%)	39 (7%)	3 (0%)	10 (1%)	1 (-1%)	-14 (-2%)	0 (-1%)	-8 (-1%)	2 (0%)

Electrical Conductivity	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	
Alt 4 Scn H3			-1328	-853	-1106	-782	-550	-632	-256	-322	-99	-176	-7	-63	1	-56	-38	-132	-119	-259	-102	-151	-149	-316	-918	-1037	-389	-398	
Western Delta	Sac. R. at Emmaton/ Threemile Sl. Nr. Sac. R.	ALL	(-61%) (-50%) (-53%) (-44%) (-44%) (-47%)	(-42%) (-47%) (-25%) (-37%) (-3%) (-19%)	(0%) (-17%) (-8%) (-23%) (-15%) (-27%)	(-11%) (-15%) (-11%) (-21%) (-11%) (-21%)	(-21%) (-36%) (-37%)	(-43%) (-46%) (-36%) (-37%)																					
		DROUGHT	-1790	-1263	-1514	-1238	-876	-1066	-355	-575	-107	-328	-16	-82	3	-66	64	-174	3	-391	109	-98	-186	-519	-1110	-1787	-481	-632	
	Sac. R. at Emmaton	ALL	-813	-338	-532	-207	-163	-244	-122	-189	8	-68	68	12	94	38	194	101	319	178	456	407	667	500	-157	-276	2	-7	
		DROUGHT	-1098	-571	-687	-411	-290	-480	-111	-330	129	-92	94	28	131	62	485	247	709	315	1070	863	841	508	49	-628	110	-41	
	SJR at Jersey Point	ALL	-994	-306	-1101	-458	-682	-448	-328	-313	-82	-118	24	-10	38	10	55	8	139	52	-251	-6	10	179	-476	-325	-304	-145	
		DROUGHT	-1022	-410	-1073	-543	-805	-467	-399	-417	-52	-182	42	1	47	15	160	28	343	82	-420	-125	8	237	-76	-429	-271	-184	
Interior Delta	S. Fork Moke. R. Term.	ALL	9	9	10	9	5	6	5	10	6	10	13	15	13	14	9	10	14	15	10	11	10	8	7	9	11		
		DROUGHT	(5%)	(5%)	(5%)	(5%)	(2%)	(3%)	(2%)	(4%)	(2%)	(4%)	(6%)	(7%)	(6%)	(7%)	(5%)	(5%)	(7%)	(8%)	(5%)	(6%)	(6%)	(4%)	(4%)	(5%)	(5%)		
	SJR at San And. Landing	ALL	8	8	8	8	3	4	1	5	-2	3	9	14	6	9	8	10	19	20	16	16	11	10	8	9	8	10	
		DROUGHT	(4%)	(4%)	(4%)	(4%)	(2%)	(2%)	(0%)	(2%)	(-1%)	(1%)	(4%)	(6%)	(3%)	(4%)	(4%)	(5%)	(10%)	(10%)	(8%)	(8%)	(6%)	(6%)	(4%)	(5%)	(4%)	(5%)	
	SJR at Vernalis	ALL	-39	29	-139	-20	-120	-67	-83	-67	-8	-16	18	11	25	22	32	22	71	51	55	82	123	152	85	55	2	21	
		DROUGHT	(-8%)	(6%)	(-22%)	(-4%)	(-20%)	(-12%)	(-20%)	(-16%)	(-3%)	(-5%)	(8%)	(4%)	(11%)	(9%)	(13%)	(9%)	(29%)	(19%)	(14%)	(23%)	(29%)	(38%)	(16%)	(10%)	(0%)	(6%)	
Southern Delta	SJR at Brandt Bridge	ALL	-26	0	-105	-28	-103	-57	-99	-57	14	-24	26	18	27	25	56	32	141	78	73	118	163	207	219	89	32	33	
		DROUGHT	(-4%)	(0%)	(-15%)	(-4%)	(-14%)	(-8%)	(-18%)	(-11%)	(4%)	(-7%)	(11%)	(7%)	(11%)	(10%)	(23%)	(12%)	(56%)	(25%)	(14%)	(24%)	(29%)	(40%)	(34%)	(12%)	(7%)	(7%)	
	Old River at Middle River	ALL	3	0	-35	0	-48	0	-82	1	-10	0	-28	0	-10	0	-5	0	56	0	38	0	7	0	-16	-1	-11	0	
		DROUGHT	(1%)	(0%)	(-6%)	(0%)	(-6%)	(0%)	(-11%)	(0%)	(-2%)	(0%)	(-4%)	(0%)	(-2%)	(0%)	(-1%)	(0%)	(11%)	(0%)	(7%)	(0%)	(1%)	(0%)	(-3%)	(-2%)	(0%)		
	Old River at Tracy Bridge	ALL	-6	0	-41	0	-53	0	-66	0	-9	0	-19	0	-4	0	-9	0	-9	0	-5	0	-7	0	-17	-2	-21	0	
		DROUGHT	(-1%)	(0%)	(-6%)	(0%)	(-6%)	(0%)	(-7%)	(-0%)	(-1%)	(-0%)	(-2%)	(0%)	(-1%)	(0%)	(-2%)	(0%)	(-1%)	(0%)	(-1%)	(0%)	(-1%)	(0%)	(-3%)	(-3%)	(-3%)	(-3%)	
	SJR at Prisoners Point	ALL	1	0	-33	0	-47	3	-83	-4	-14	0	-28	-1	-12	-5	-6	-1	55	0	36	13	11	9	-14	0	-11	1	
		DROUGHT	(0%)	(0%)	(-6%)	(0%)	(-6%)	(0%)	(-11%)	(-1%)	(-2%)	(0%)	(-4%)	(-0%)	(-3%)	(-1%)	(-1%)	(-0%)	(10%)	(0%)	(6%)	(2%)	(2%)	(-3%)	(-3%)	(-2%)	(0%)		
Export Area	Banks PP	ALL	6	5	-32	1	-48	0	-74	7	-11	2	-25	2	-3	6	-3	2	54	0	39	3	10	1	-14	0	-8	2	
		DROUGHT	(-1%)	(1%)	(-6%)	(0%)	(-6%)	(0%)	(-10%)	(1%)	(-2%)	(0%)	(-4%)	(-0%)	(-1%)	(-1%)	(-1%)	(-0%)	(10%)	(-0%)	(7%)	(0%)	(2%)	(-3%)	(-3%)	(-2%)	(0%)		
	Jones PP	ALL	4	11	-23	5	-50	-1	-55	24	-6	12	-17	10	24	35	3	9	41	-6	33	2	7	13	-11	9	-4	10	
		DROUGHT	(1%)	(2%)	(-4%)	(1%)	(-7%)	(-0%)	(-7%)	(3%)	(-1%)	(2%)	(-3%)	(2%)	(5%)	(7%)	(1%)	(2%)	(8%)	(-1%)	(6%)	(0%)	(1%)	(2%)	(-2%)	(-2%)	(-1%)	(2%)	

^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

1

2

3

1 Table EC-15D. Period average change in EC levels for Alternative 4-H4 LLT relative to existing conditions and the No Action Alternative LLT.

Electrical Conductivity	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT			
Alt 4 Scn H4			-885 (-41%)	-409 (-24%)	-632 (-30%)	-307 (-17%)	-82 (-7%)	-164 (-12%)	-1 (-0%)	-68 (-10%)	42 (10%)	-34 (-7%)	61 (23%)	5 (2%)	85 (31%)	28 (8%)	173 (36%)	80 (14%)	319 (39%)	178 (19%)	515 (54%)	467 (46%)	615 (30%)	448 (-8%)	-172 (-13%)	-292 (0%)	3 (-1%)	-6	
Western Delta	Sac. R. at Emmatton	ALL	-1099 (-38%)	-572 (-24%)	-891 (-31%)	-614 (-23%)	-50 (-3%)	-241 (-11%)	99 (12%)	-120 (-11%)	195 (35%)	-26 (-3%)	96 (30%)	31 (8%)	453 (40%)	49 (14%)	215 (77%)	690 (26%)	296 (67%)	1085 (21%)	878 (81%)	734 (57%)	401 (42%)	-106 (19%)	-783 (-4%)	110 (-22%)	-40 (8%)	-3	-6
		DROUGHT	-984 (-50%)	-295 (-23%)	-1195 (-54%)	-552 (-35%)	-650 (-39%)	-416 (-29%)	-247 (-27%)	-231 (-11%)	-50 (-18%)	-87 (10%)	-28 (-2%)	-5 (-2%)	41 (15%)	13 (4%)	51 (14%)	4 (1%)	126 (23%)	39 (6%)	-315 (-22%)	-71 (-6%)	7 (0%)	176 (13%)	-449 (-22%)	-298 (-16%)	-303 (-27%)	-144 (-15%)	
		ALL	-970 (-42%)	-358 (-21%)	-1244 (-48%)	-714 (-35%)	-779 (-35%)	-441 (-24%)	-248 (-23%)	-266 (-24%)	5 (1%)	-125 (-19%)	52 (16%)	12 (3%)	49 (18%)	17 (5%)	142 (35%)	10 (2%)	311 (47%)	50 (5%)	-408 (-19%)	-112 (-6%)	49 (3%)	278 (16%)	-128 (-5%)	-481 (-17%)	-264 (-19%)	-178 (-13%)	
		DROUGHT	8 (4%)	8 (4%)	9 (5%)	9 (5%)	5 (2%)	6 (3%)	7 (3%)	12 (5%)	11 (5%)	13 (6%)	15 (7%)	12 (6%)	13 (7%)	9 (5%)	10 (5%)	15 (5%)	16 (8%)	13 (9%)	13 (7%)	10 (6%)	9 (5%)	8 (4%)	7 (4%)	10 (5%)	11 (5%)		
	S. Fork Moke. R. Term.	ALL	7 (4%)	7 (4%)	8 (4%)	8 (4%)	5 (3%)	6 (3%)	3 (1%)	7 (3%)	-1 (-0%)	4 (2%)	9 (4%)	14 (6%)	7 (3%)	10 (5%)	9 (5%)	11 (6%)	20 (10%)	21 (11%)	16 (8%)	16 (8%)	10 (5%)	9 (4%)	7 (4%)	8 (4%)	10 (5%)		
		DROUGHT	-42 (4%)	26 (4%)	-163 (4%)	-44 (4%)	-121 (3%)	-69 (3%)	-45 (1%)	-28 (3%)	10 (1%)	2 (1%)	25 (11%)	18 (7%)	31 (13%)	27 (11%)	35 (14%)	25 (10%)	75 (30%)	55 (20%)	37 (9%)	63 (18%)	99 (23%)	128 (32%)	89 (17%)	59 (11%)	3 (6%)	22 (5%)	
		ALL	-25 (-8%)	1 (6%)	-148 (-26%)	-71 (-9%)	-122 (-20%)	-76 (-13%)	-38 (-10%)	-7 (-7%)	4 (-4%)	44 (-1%)	6 (-11%)	36 (7%)	28 (13%)	41 (11%)	39 (14%)	41 (10%)	137 (30%)	74 (20%)	67 (9%)	112 (18%)	159 (23%)	202 (32%)	199 (17%)	69 (11%)	35 (6%)	36 (8%)	
		DROUGHT	-42 (-4%)	1 (0%)	-148 (-21%)	-71 (-11%)	-122 (-17%)	-76 (-11%)	-38 (-7%)	4 (-1%)	44 (-13%)	6 (-11%)	36 (13%)	28 (17%)	41 (16%)	39 (26%)	65 (15%)	41 (54%)	137 (23%)	74 (13%)	159 (23%)	202 (29%)	199 (40%)	199 (31%)	69 (9%)	35 (7%)	36 (8%)		
Interior Delta	SJR at San And. Landing	ALL	3 (1%)	0 (0%)	-35 (-6%)	0 (0%)	-48 (-6%)	0 (-0%)	-96 (-13%)	-13 (-2%)	-11 (-2%)	-1 (-0%)	-28 (-4%)	0 (-0%)	-11 (-2%)	0 (-2%)	-11 (-0%)	0 (-0%)	56 (-11%)	0 (-11%)	38 (-11%)	0 (-11%)	7 (-1%)	0 (-1%)	-17 (-3%)	-2 (-3%)	-12 (-2%)	-1 (-0%)	
		DROUGHT	-6 (-1%)	0 (0%)	-41 (-6%)	0 (-0%)	-53 (-6%)	0 (-0%)	-66 (-7%)	0 (-0%)	-9 (-1%)	0 (-1%)	-20 (-2%)	0 (-2%)	-5 (-1%)	-1 (-0%)	-10 (-2%)	-1 (-0%)	-9 (-1%)	0 (-1%)	-5 (-1%)	0 (-1%)	-7 (-1%)	0 (-1%)	-20 (-4%)	-4 (-2%)	0 (-21%)	0 (0%)	
		ALL	1 (0%)	0 (-0%)	-33 (-6%)	0 (0%)	-47 (-6%)	3 (0%)	-96 (-13%)	-17 (-3%)	-15 (-2%)	-1 (-0%)	-28 (-4%)	-1 (-0%)	-12 (-3%)	-6 (-1%)	-1 (-1%)	-54 (-0%)	0 (-0%)	35 (6%)	12 (2%)	11 (2%)	9 (2%)	-15 (-3%)	-1 (-0%)	-13 (-2%)	0 (-0%)		
		DROUGHT	-7 (-1%)	0 (-0%)	-39 (-6%)	0 (0%)	-52 (-6%)	4 (1%)	-67 (-7%)	-3 (-0%)	-13 (-1%)	2 (0%)	-20 (-2%)	-3 (-0%)	-8 (-1%)	-12 (-2%)	-10 (-0%)	-2 (-1%)	-8 (-0%)	0 (-0%)	-16 (-1%)	43 (-0%)	-7 (-1%)	33 (-1%)	-18 (-3%)	-3 (-3%)	-22 (-5%)	5 (-0%)	
		ALL	6 (1%)	5 (1%)	-32 (-6%)	1 (0%)	-48 (-6%)	0 (0%)	-87 (-12%)	-6 (-1%)	-13 (-2%)	1 (0%)	-25 (-4%)	2 (0%)	-3 (-1%)	6 (1%)	-4 (1%)	2 (1%)	53 (10%)	-1 (-0%)	39 (7%)	3 (0%)	10 (2%)	1 (0%)	-15 (-3%)	-1 (-0%)	-10 (-2%)	1 (0%)	
		DROUGHT	-3 (-1%)	4 (1%)	-38 (-6%)	1 (0%)	-54 (-6%)	0 (0%)	-58 (-6%)	7 (1%)	-11 (-1%)	2 (0%)	-14 (-2%)	4 (0%)	10 (2%)	10 (2%)	-6 (2%)	3 (2%)	-8 (-1%)	0 (-0%)	-4 (-1%)	8 (-1%)	-6 (-1%)	2 (-1%)	-19 (-4%)	-4 (-4%)	-18 (-3%)	3 (0%)	
	Old River at Middle River	ALL	6 (1%)	13 (3%)	-22 (-4%)	6 (1%)	-49 (-6%)	-1 (-0%)	-64 (-8%)	15 (2%)	-9 (-1%)	-17 (-1%)	-11 (-2%)	-2 (-2%)	-25 (-5%)	35 (7%)	3 (1%)	8 (2%)	45 (9%)	-3 (-0%)	35 (6%)	5 (1%)	1 (0%)	-16 (-3%)	5 (1%)	-5 (-3%)	9 (1%)	-1 (-0%)	
		DROUGHT	-3 (-1%)	12 (1%)	-24 (-4%)	14 (2%)	-54 (-6%)	1 (0%)	-49 (-5%)	16 (2%)	-15 (-2%)	3 (0%)	-20 (-0%)	-3 (-0%)	-8 (-2%)	-10 (-1%)	-2 (-0%)	-8 (-1%)	0 (-0%)	-16 (-1%)	43 (-2%)	-7 (-1%)	33 (-1%)	-18 (-3%)	-3 (-3%)	-22 (-5%)	5 (-0%)	0 (-0%)	
		ALL	6 (1%)	13 (3%)	-22 (-4%)	6 (1%)	-49 (-6%)	-1 (-0%)	-64 (-8%)	15 (2%)	-9 (-1%)	-17 (-1%)	-11 (-2%)	-2 (-2%)	-25 (-5%)	35 (7%)	3 (1%)	8 (2%)	45 (9%)	-3 (-0%)	35 (6%)	5 (1%)	1 (0%)	-16 (-3%)	5 (1%)	-5 (-3%)	9 (1%)	-1 (-0%)	
		DROUGHT	5 (1%)	12 (2%)																									

Electrical Conductivity	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change	
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT																						
Alt 4 Scn H4			-1363	-887	-1169	-845	-506	-588	-188	-254	-79	-156	-9	-65	-2	-59	-47	-141	-116	-257	-76	-124	-188	-355	-929	-1048	-389	-398
Western Delta	Sac. R. at Emmaton/ Threemile Sl. Nr. Sac. R.	ALL	(-62%)	(-52%)	(-56%)	(-48%)	(-41%)	(-44%)	(-31%)	(-37%)	(-20%)	(-32%)	(-3%)	(-20%)	(-1%)	(-18%)	(-10%)	(-25%)	(-14%)	(-27%)	(-8%)	(-12%)	(-14%)	(-23%)	(-44%)	(-47%)	(-36%)	(-37%)
		DROUGHT	(-61%)	(-52%)	(-57%)	(-52%)	(-39%)	(-45%)	(-27%)	(-42%)	(-12%)	(-37%)	(-4%)	(-20%)	(-0%)	(-19%)	(8%)	(-23%)	(-1%)	(-28%)	(9%)	(-6%)	(-15%)	(-28%)	(-41%)	(-52%)	(-33%)	(-40%)
	Sac. R. at Emmaton	ALL	-885	-409	-632	-307	-82	-164	-1	-68	42	-34	61	5	85	28	173	80	319	178	515	467	615	448	-172	-292	3	-6
		DROUGHT	-1099	-572	-891	-614	-50	-241	99	-120	195	-26	96	31	118	49	453	215	690	296	1085	878	734	401	-106	-783	110	-40
	SJR at Jersey Point	ALL	-984	-295	-1195	-552	-650	-416	-247	-231	-50	-87	28	-5	41	13	51	4	126	39	-315	-71	7	176	-449	-298	-303	-144
		DROUGHT	-970	-358	-1244	-714	-779	-441	-248	-266	5	-125	52	12	49	17	142	10	311	50	-408	-112	49	278	-128	-481	-264	-178
Interior Delta	S. Fork Moke. R. Term.	ALL	8	8	9	9	5	6	7	12	7	11	13	15	12	13	9	10	15	16	13	13	10	9	8	7	10	11
		DROUGHT	7	7	8	8	5	6	3	7	-1	4	9	14	7	10	9	11	20	21	16	16	10	9	7	8	8	10
	SJR at San And. Landing	ALL	-42	26	-163	-44	-121	-69	-45	-28	10	2	25	18	31	27	35	25	75	55	37	63	99	128	89	59	3	22
		DROUGHT	(-8%)	(6%)	(-26%)	(-9%)	(-20%)	(-13%)	(-10%)	(-7%)	(4%)	(1%)	(11%)	(7%)	(13%)	(11%)	(14%)	(10%)	(30%)	(20%)	(9%)	(18%)	(23%)	(32%)	(17%)	(11%)	(1%)	(6%)
	SJR at Vernalis	ALL	3	0	-35	0	-48	0	-96	-13	-11	-1	-28	0	-11	0	-6	0	56	0	38	0	7	0	-17	-2	-12	-1
		DROUGHT	(1%)	(0%)	(-6%)	(0%)	(-6%)	(-0%)	(-13%)	(-2%)	(-2%)	(-0%)	(-4%)	(-0%)	(-2%)	(-0%)	(-1%)	(-1%)	(-0%)	(11%)	(-0%)	(7%)	(0%)	(1%)	(0%)	(-3%)	(-0%)	(-2%)
Southern Delta	SJR at Brandt Bridge	ALL	-6	0	-41	0	-53	0	-66	0	-9	0	-20	0	-5	-1	-10	-1	-9	0	-5	0	-7	0	-20	-4	-21	0
		DROUGHT	(-1%)	(0%)	(-6%)	(-0%)	(-6%)	(-0%)	(-7%)	(-0%)	(-1%)	(-0%)	(-2%)	(-0%)	(-1%)	(-0%)	(-2%)	(-0%)	(-1%)	(-0%)	(-1%)	(-0%)	(-1%)	(-0%)	(-3%)	(-1%)	(-3%)	(-0%)
	Old River at Middle River	ALL	1	0	-33	0	-47	3	-96	-17	-15	-1	-28	-1	-12	-6	-6	-1	54	0	35	12	11	9	-15	-1	-13	0
		DROUGHT	(-1%)	(0%)	(-6%)	(0%)	(-6%)	(-0%)	(-13%)	(-3%)	(-2%)	(-0%)	(-4%)	(-0%)	(-3%)	(-1%)	(-1%)	(-0%)	(10%)	(-0%)	(6%)	(2%)	(2%)	(-3%)	(-0%)	(-2%)	(-0%)	
	Old River at Tracy Bridge	ALL	-7	0	-39	0	-52	4	-67	-3	-13	2	-20	-3	-8	-12	-10	-2	-8	0	-16	43	-7	33	-18	-3	-22	5
		DROUGHT	(-1%)	(0%)	(-6%)	(0%)	(-6%)	(-1%)	(-7%)	(-0%)	(-1%)	(-0%)	(-2%)	(-0%)	(-1%)	(-0%)	(-2%)	(-0%)	(-1%)	(-0%)	(-2%)	(-0%)	(-1%)	(-3%)	(-1%)	(-3%)	(1%)	
SJR	SJR at Prisoners Point	ALL	6	5	-32	1	-48	0	-87	-6	-13	1	-25	2	-3	6	-4	2	53	-1	39	3	10	1	-15	-1	-10	1
		DROUGHT	(-1%)	(1%)	(-6%)	(0%)	(-6%)	(-0%)	(-12%)	(-1%)	(-2%)	(0%)	(-4%)	(0%)	(-1%)	(0%)	(-1%)	(0%)	(10%)	(-0%)	(7%)	(0%)	(2%)	(0%)	(-3%)	(-0%)	(-2%)	(0%)
	Banks PP	ALL	-44	17	-166	-40	-189	-103	-82	-43	32	46	63	74	67	87	47	56	69	70	-9	35	-6	56	19	35	-17	24
		DROUGHT	(-9%)	(4%)	(-28%)	(-8%)	(-31%)	(-19%)	(-16%)	(-9%)	(8%)	(12%)	(19%)	(23%)	(20%)	(27%)	(15%)	(18%)	(24%)	(24%)	(-2%)	(10%)	(14%)	(4%)	(7%)	(-4%)	(6%)	
	Jones PP	ALL	-41	-14	-166	-72	-224	-135	-116	-40	41	44	109	126	124	145	98	95	107	66	-57	6	-5	99	79	42	-4	30
		DROUGHT	(-7%)	(-2%)	(-25%)	(-13%)	(-30%)	(-21%)	(-19%)	(-8%)	(10%)	(11%)	(28%)	(34%)	(35%)	(43%)	(32%)	(31%)	(40%)	(21%)	(-10%)	(1%)	(-1%)	(20%)	(13%)	(6%)	(-1%)	(6%)
Export Area	ALL	ALL	-55	-14	-250	-131	-255	-161	-284	-233	-154	-145	-140	-133	-141	-132	-72	-69	-82	-102	-70	-50	-93	-21	-152	-114	-146	-109
		DROUGHT	(-10%)	(-3%)	(-40%)	(-25%)	(-38%)	(-28%)	(-43%)	(-38%)	(-29%)	(-20%)	(-39%)	(-38%)	(-42%)	(-41%)	(-39%)	(-39%)	(-39%)	(-29%)	(-17%)	(-16%)	(-12%)	(-18%)	(-5%)	(-28%)	(-22%)	(-27%)
	ALL	ALL	-18	-3	-195	-109	-328	-236	-374	-310	-150	-130	-252	-240	-264	-255	-217	-216	-32	-71	-106	-68	-124	11	-18	17	-173	-134
		DROUGHT	(-3%)	(-1%)	(-28%)	(-18%)	(-40%)	(-33%)	(-4																			