

Appendix 12E Fisheries Water Temperature Assessment Summary Tables

Line items and numbers identified or noted as “No Action Alternative” represent the “Existing Conditions/No Project/No Action Condition” (described in Chapter 2 Alternatives Analysis).
Table numbering may not be consecutive for all appendixes.

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APPENDIX 12E

Fisheries Water Temperature Assessment Summary Tables

12E.1 Results

This appendix includes the results of the Fisheries Water Temperature Assessment Summary Tables for the Sites Reservoir Project (Project) action alternatives (alternatives) evaluated in the Draft Environmental Impact Report/Environmental Impact Statement (DEIR/EIS). The fisheries impact assessment and methodology is described in Chapter 12 Aquatic Biological Resources and in Appendix 12B Fisheries Impact Assessment Methodology and Appendix 12C Fisheries Impact Summary.

12E.1.1 Introduction

The Fisheries Water Temperature Assessment Summary Tables were the primary tools utilized to assess the potential impacts on fisheries due to changes in water temperatures in the major riverine environments evaluated.

The riverine environments evaluated include:

- Upper Trinity River
- Clear Creek
- Sacramento River
- Lower Feather River
- Lower American River

The species evaluated include:

- Delta Smelt (*Hypomesus transpacificus*) (Included in Sacramento River)
- Longfin Smelt (*Spirinchus thaleichthys*)
- Coho Salmon (*Oncorhynchus kisutch*)
- Winter-run Chinook Salmon (*Oncorhynchus tshawytscha*)
- Spring-run Chinook Salmon (*Oncorhynchus tshawytscha*)
- Fall-run Chinook Salmon (*Oncorhynchus tshawytscha*)
- Late Fall-run Chinook Salmon (*Oncorhynchus tshawytscha*)
- Steelhead (*Oncorhynchus mykiss*)
- Green Sturgeon (*Acipenser medirostris*)
- White Sturgeon (*Acipenser transmontanus*)
- Pacific Lamprey (*Lampetra tridentata*)
- River Lamprey (*Lampetra ayresi*)
- Hardhead (*Mylopharodon conocephalus*)
- California Roach (*Hesperoleucus symmetricus*)
- Splittail (*Pogonichthys macrolepidotus*)
- Striped Bass (*Morone saxatilis*)
- American Shad (*Alosa sapidissima*)
- Largemouth Bass (*Micropterus salmoides*)

For each riverine environment and species, these tables identify the parameters evaluated according to:

- Life stages evaluated
- Life stage periodicity (time period) evaluated
- Types of evaluation conducted
- Locations evaluated
- Evaluation criteria

The parameters evaluated include:

- Water temperature (°F) relative to water temperature indices (see Appendix 12D Water Temperature Index Value Selection Rationale for water temperature index value justification)
- Water temperature ranges (°F) considered suitable for a particular species and life stage (see Appendix 12D Water Temperature Index Value Selection Rationale for water temperature ranges and justification)

12E.1.2 Methodology

The evaluation methods are described below. Please refer to the comparisons presented in the next section, to follow along, as the methods are described.

In general, the tables present the changes in performance metrics by month. A performance metric is generally the probability of exceedance of a parameter against a given target or a threshold identified to be critical for a species. The difference between the performance metrics for an alternative and the baseline¹ is the net change and represents the performance of an alternative in meeting a threshold relative to the baseline. The tables show the net change in the performance metric for a given parameter under an alternative relative to a baseline.

For example, if the net change in probability of exceedance (or occurrence) is higher (a positive number), the criterion was exceeded (or met) more often under the alternative than under the baseline condition. If the net change in probability of exceedance (or occurrence) is lower (a negative number), the criterion was exceeded (or met) less often under the alternative than under the baseline condition.

In the summary tables, shading helps elucidate more suitable or less suitable conditions. Specifically, blue shading indicates more suitable (better) habitat conditions under an alternative, relative to a baseline. Red shading indicates less suitable (worse) habitat conditions.

Below are examples of how each parameter was evaluated.

Water temperature indices: For a given month, if a water temperature index value is exceeded in 10 percent of the years (out of the 82 years modeled) under the alternative and 15 percent of the years under the baseline condition, the net difference in exceedance is negative five percent of the years, which indicates that water temperatures exceed the index value five percent less under the alternative. Water temperature exceedance for cold water species indicates that water temperatures exceeded a value that represents the temperature above which physiological or population effects occur (see Appendix 12D Water Temperature Index Value Selection Rationale for water temperature index value justification). If water temperatures exceed an index value less often under an alternative, then conditions are more

¹ For the purposes of comparison, the baseline includes both Existing Conditions and the No Project/No Action Alternative.

suitable more often with respect to the index value. Therefore, in the summary tables, negative exceedances of water temperature index values indicate better conditions under the alternative, relative to the baseline, and are shaded blue.

Water temperature ranges: When water temperature ranges are evaluated, the net change represents the percentage of time when water temperatures are within the range more often/less often. Positive values indicate that water temperatures are within the specified range more often under an alternative, relative to a baseline, and are shaded blue.

12E.1.3 Comparisons

For each river basin, a Fisheries Impact Assessment Summary Tables report is provided for each of the following comparisons:

- Alternative A compared to No Action Alternative
- Alternative B compared to No Action Alternative
- Alternative C compared to No Action Alternative
- Alternative D compared to No Action Alternative

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Fisheries Water Temperature
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Appendix 12E
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Trinity River

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Alternative A Compared to No Action Alternative

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**Table AQ-T-1-3a
Coho Salmon in Upper Trinity River**

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative													
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	September through January	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	40	All Years	0.0	0.3	3.6	4.8								0.0		
				52	All Years	-2.5	0.0	0.0	0.0									0.0	
				57	All Years	-2.5	0.0	0.0	0.0										-0.8
				60	All Years	-0.6	0.0	0.0	0.0										-1.6
				70	All Years	0.0	0.0	0.0	0.0										0.0
			Trinity River at Douglas City	77	All Years	0.0	0.0	0.0	0.0										0.0
				40	All Years	0.0	-0.8	-3.1	2.5										0.0
				52	All Years	1.9	0.0	0.0	0.0										0.0
				57	All Years	-2.2	0.0	0.0	0.0										-2.7
				60	All Years	0.0	0.0	0.0	0.0										-2.9
			Trinity River at North Fork	70	All Years	0.0	0.0	0.0	0.0										0.0
				77	All Years	0.0	0.0	0.0	0.0										0.0
				40	All Years	0.0	-0.7	-0.6	0.0										0.0
				52	All Years	-1.2	0.0	0.0	0.0										0.0
				57	All Years	-0.2	0.0	0.0	0.0										0.3
Adult Spawning and Embryo Incubation	October through May	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	60	All Years	0.0	0.3	3.6	4.8	0.2	0.0	0.0	0.0						
				43	All Years	0.0	-0.6	1.2	0.0	0.0	0.0	0.0	0.0						
				48	All Years	0.0	0.4	0.0	0.0	0.0	0.0	-5.0	-1.0	-0.7					
				50	All Years	2.3	-0.2	0.0	0.0	0.0	0.0	-2.5	-3.8	1.2					
				56	All Years	-4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
			Trinity River at Douglas City	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
				40	All Years	0.0	-0.8	-3.1	2.5	0.0	0.0	0.0	0.0						
				43	All Years	0.0	-1.3	2.2	0.0	0.0	0.0	0.0	0.0						
				48	All Years	0.2	-1.5	0.0	0.0	0.0	0.0	-2.5	0.1	-1.2					
				50	All Years	-1.3	0.2	0.0	0.0	0.0	0.0	0.0	-2.1	-1.2					
			Trinity River at North Fork	56	All Years	-4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0					
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
				40	All Years	0.0	-0.7	-0.6	0.0	0.0	0.0	0.0	0.0	0.0					
				43	All Years	0.0	-3.7	-1.2	0.0	0.0	0.0	0.0	0.0	0.0					
				48	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	50	All Years	0.0	-0.5	0.6	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				48	All Years	0.0	0.4	0.0	0.0	0.0	0.0	-5.0	-1.0	-0.7	0.0	0.0	-0.5	0.0	
				54	All Years	-0.6	0.0	0.0	0.0	0.0	0.0	1.3	-1.3	0.0	1.3	1.4	-3.3	0.7	
				57	All Years	-2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	-2.7	-2.8	-0.8	
				60	All Years	-0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-0.7	-1.8	-1.6	
			Trinity River at Douglas City	64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.2	-2.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				77	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				41	All Years	0.0	-1.0	0.6	-2.5	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				48	All Years	0.2	-1.5	0.0	0.0	0.0	0.0	-2.5	0.1	-1.2	0.0	0.0	0.0	0.0	0.0
			Trinity River at North Fork	54	All Years	-1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.9	0.0	0.0	0.0	0.0
				57	All Years	-2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.8	0.0	2.9	-2.7	
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	-1.3	-2.9	
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-1.6	-2.1	-1.7	
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Smolt Emigration	February through June	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	77	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				50	All Years							-2.5	-3.8	1.2	1.3				
				59	All Years							0.0	0.0	0.0	0.0	-0.1			
				62	All Years							0.0	0.0	0.0	0.0	0.0			
				70	All Years							0.0	0.0	0.0	0.0	0.0			
			Trinity River at Douglas City	50	All Years							0.0	0.0	-2.1	-1.2	0.0			
				59	All Years							0.0	0.0	0.0	0.0	1.3			
				62	All Years							0.0	0.0	0.0	0.0	0.0			
				70	All Years							0.0	0.0	0.0	0.0	0.0			
				70	All Years							0.0	0.0	0.0	0.0	0.0			
			Trinity River at North Fork	50	All Years							0.0	0.3	0.0	-1.2	0.0			
				59	All Years							0.0	0.0	0.0	0.0	0.0			
				62	All Years							0.0	0.0	0.0	0.0	0.0			
				70	All Years							0.0	0.0	0.0	0.0	0.0			
				70	All Years							0.0	0.0	0.0	0.0	0.0			

Table AQ-T-1-3e
Green Sturgeon in the Upper Trinity River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative											
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	February through November	Monthly mean water temperatures (°F)	Trinity River at North Fork	61	All Years	0.0	0.0			0.0	0.0	0.0	0.0	0.0	-1.2	-1.3	0.1	-2.3
			Trinity River at North Fork	66	All Years	0.0	0.0			0.0	0.0	0.0	0.0	0.0	-0.1	0.6	2.5	-0.2
Adult Spawning	May through August	Monthly mean water temperatures (°F)	Trinity River at North Fork	68	All Years								0.0	0.0	-0.8	-2.1		
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River at North Fork	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.6	2.5	-0.2	

Table AQ-T-1-3f

White Sturgeon in the Upper Trinity River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative										
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Adult Immigration and Holding	November through May	Monthly mean water temperatures (°F)	Trinity River at North Fork	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Adult Spawning	February through May	Monthly mean water temperatures (°F)	Trinity River at North Fork	61	All Years					0.0	0.0	0.0	0.0				
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River at North Fork	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.6	2.5	-0.2

Table AQ-T-1-3g
Pacific Lamprey in the Upper Trinity River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Trinity River Below Lewiston Dam	50-64	All Years				0.0	0.0	-2.5	-3.8	1.2	1.3	1.3	0.3	
			Trinity River at Douglas City	50-64	All Years				0.0	0.0	0.0	-2.1	-1.2	0.1	1.6	2.1	
			Trinity River at North Fork	50-64	All Years				0.0	0.0	0.3	0.0	-1.2	0.0	1.3	1.9	
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River Below Lewiston Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Trinity River at Douglas City	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Trinity River at North Fork	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

*Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

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Alternative B Compared to No Action Alternative

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Table AQ-T-1-5a
Coho Salmon in Upper Trinity River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative												
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Immigration and Holding	September through January	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	40	All Years	0.0	0.3	4.8	3.7								0.0		
				52	All Years	-1.7	0.8	0.0	0.0									0.0	
				57	All Years	-1.5	0.0	0.0	0.0										-3.7
				60	All Years	-0.5	0.0	0.0	0.0										-1.4
				70	All Years	0.0	0.0	0.0	0.0										0.0
			Trinity River at Douglas City	77	All Years	0.0	0.0	0.0	0.0										0.0
				40	All Years	0.0	-0.8	-1.9	3.7										0.0
				52	All Years	-2.3	0.0	0.0	0.0										0.0
				57	All Years	-3.0	0.0	0.0	0.0										-2.2
				60	All Years	0.0	0.0	0.0	0.0										-4.2
			Trinity River at North Fork	70	All Years	0.0	0.0	0.0	0.0										0.9
				77	All Years	0.0	0.0	0.0	0.0										0.4
				40	All Years	0.0	-0.7	-0.6	-1.8										0.0
				52	All Years	-1.2	0.0	0.0	0.0										0.0
				57	All Years	-0.2	0.0	0.0	0.0										0.0
Trinity River below Lewiston Dam	60	All Years	0.0	0.0	0.0	0.0										-5.0			
	70	All Years	0.0	0.0	0.0	0.0										0.5			
	77	All Years	0.0	0.0	0.0	0.0										0.0			
	40	All Years	0.0	0.3	4.8	3.7	1.4	0.0	0.0	0.0									
	43	All Years	0.0	-1.9	1.2	0.0	0.0	-0.2	0.0	0.0									
	48	All Years	1.3	-1.9	0.0	0.0	0.0	-5.0	2.3	-0.7									
	50	All Years	0.2	-0.4	0.0	0.0	0.0	-2.5	-2.5	1.2									
Trinity River at Douglas City	56	All Years	-2.7	0.0	0.0	0.0	0.0	0.0	0.2	0.0									
	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0									
	40	All Years	0.0	-0.8	-1.9	3.7	0.0	0.0	0.0	0.0									
	43	All Years	0.0	-1.3	0.9	0.0	0.0	0.0	0.0	0.0									
Trinity River at North Fork	48	All Years	-0.2	-1.5	0.0	0.0	0.0	-1.2	0.1	1.3									
	50	All Years	-2.5	0.2	0.0	0.0	0.0	0.0	-2.1	-1.2									
	56	All Years	-3.4	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0								
	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
Trinity River below Lewiston Dam	40	All Years	0.0	-0.7	-0.6	-1.8	0.0	0.0	0.0	0.0									
	43	All Years	0.0	-1.2	-1.2	0.0	0.0	0.0	0.0	0.0									
	48	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0									
	50	All Years	-0.2	0.6	0.0	0.0	0.0	0.3	0.0	0.0									
	56	All Years	-1.8	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.2								
	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
	41	All Years	0.0	-1.3	1.8	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Trinity River at Douglas City	48	All Years	1.3	-1.9	0.0	0.0	0.0	-5.0	2.3	-0.7	1.0	0.0	-0.3	-6.3					
	54	All Years	-1.3	0.1	0.0	0.0	0.0	1.3	0.0	0.0	1.3	1.4	-5.0	-0.2					
	57	All Years	-1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	-1.3	-1.2	-3.7					
	60	All Years	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-0.7	0.0	-1.4					
	64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.9					
	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
	77	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
	41	All Years	0.0	-1.0	1.2	-5.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
	48	All Years	-0.2	-1.5	0.0	0.0	0.0	0.0	-1.2	0.1	1.3	0.0	0.0	0.0	0.0				
	54	All Years	-0.6	0.0	0.0	0.0	0.0	0.0	-1.2	0.1	-0.4	0.0	0.0	-2.5					
Trinity River at North Fork	57	All Years	-3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.8	-1.3	1.9	-2.2					
	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	-1.3	-4.2					
	64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-1.8	0.0	-0.3				
	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9				
	77	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4				
	41	All Years	0.0	-0.2	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
	48	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Trinity River below Lewiston Dam	54	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	1.3	-0.7	0.3	0.0	0.0	0.0					
	57	All Years	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.3	0.0	0.0	0.0					
	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	-5.0					
	64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	-2.5	-0.1					
	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5				
	77	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
	50	All Years						0.0	-2.5	-2.5	1.2	-1.2							
Trinity River at Douglas City	59	All Years						0.0	0.0	0.0	0.0	-1.3							
	62	All Years						0.0	0.0	0.0	0.0	0.0							
	70	All Years						0.0	0.0	0.0	0.0	0.0							
	50	All Years						0.0	0.0	-2.1	-1.2	0.3							
	59	All Years						0.0	0.0	0.0	0.0	0.0							
	62	All Years						0.0	0.0	0.0	0.0	0.3							
	70	All Years						0.0	0.0	0.0	0.0	0.0							
Trinity River at North Fork	50	All Years						0.0	0.3	0.0	0.0	0.0							
	59	All Years						0.0	0.0	0.0	0.0	1.2							
	62	All Years						0.0	0.0	0.0	0.0	-2.5							
70	All Years						0.0	0.0	0.0	0.0	0.0								

Table AQ-T-1-5c

Upper Klamath-Trinity River Fall-run Chinook Salmon in the Trinity River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative													
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	August through December	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	60	All Years	-0.5	0.0	0.0									0.0	-1.4		
				64	All Years	0.0	0.0	0.0										0.0	-0.9	
				68	All Years	0.0	0.0	0.0										0.0	-0.1	
			Trinity River at Douglas City	60	All Years	0.0	0.0	0.0											-1.3	-4.2
				64	All Years	0.0	0.0	0.0										0.0	-0.3	
				68	All Years	0.0	0.0	0.0										0.0	1.1	
			Trinity River at North Fork	60	All Years	0.0	0.0	0.0											0.0	-5.0
				64	All Years	0.0	0.0	0.0											-2.5	-0.1
				68	All Years	0.0	0.0	0.0											0.2	0.9
Adult Spawning and egg incubation	October through June	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	56	All Years	-2.7	0.0	0.0	0.0	0.0	0.0	0.2	0.0	1.4						
				58	All Years	-2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1						
				60	All Years	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0					
			Trinity River at Douglas City	56	All Years	-3.4	0.0	0.0	0.0	0.0	0.0	1.0	0.0	-0.4						
				58	All Years	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0						
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2						
			Trinity River at North Fork	62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3						
				56	All Years	-1.8	0.0	0.0	0.0	0.0	0.0	-0.5	0.2	1.3						
				58	All Years	-0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.2						
Trinity River at North Fork	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2									
	62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.5									
	60	All Years	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-0.7	0.0	0.0	-1.4					
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	-1.4		
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1		
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Trinity River at Douglas City	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	-1.3	-4.2			
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.7	-1.1	-0.1	-0.4			
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	0.2	-0.2			
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1			
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9			
			Trinity River at North Fork	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6			
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	-5.0			
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-0.7			
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.2	1.3	0.2			
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.7	0.2	0.9			
Smolt Emigration	February through July	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	70	All Years						0.0	0.0	0.0	-1.0	-0.7					
				63	All Years						0.0	0.0	0.0	0.0	0.0	0.0				
				65	All Years						0.0	0.0	0.0	0.0	0.0	0.0				
				68	All Years						0.0	0.0	0.0	0.0	0.0	0.0				
				70	All Years						0.0	0.0	0.0	0.0	0.0	0.0				
			Trinity River at Douglas City	60	All Years							0.0	0.0	0.0	0.0	1.2	0.0			
				63	All Years							0.0	0.0	0.0	0.0	-0.7	-1.1			
				65	All Years							0.0	0.0	0.0	0.0	-1.0				
				68	All Years							0.0	0.0	0.0	0.0	0.0				
Trinity River at North Fork	70	All Years							0.0	0.0	0.0	0.0	0.0	0.0						
	75	All Years							0.0	0.0	0.0	0.0	0.0	0.0						
	60	All Years							0.0	0.0	0.0	0.0	0.2	0.0						
	63	All Years							0.0	0.0	0.0	0.0	0.0	0.0						
	65	All Years							0.0	0.0	0.0	0.0	0.0	-1.2						
Trinity River at North Fork	68	All Years							0.0	0.0	0.0	0.0	0.0	-1.7						
	70	All Years							0.0	0.0	0.0	0.0	0.0	0.0						
	75	All Years							0.0	0.0	0.0	0.0	0.0	0.0						
	75	All Years							0.0	0.0	0.0	0.0	0.0	0.0						

Table AQ-T-1-5d

Steelhead (Winter and Summer-run) in Upper Trinity River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative												
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Immigration and Holding (Winter-run)	August through April	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	52	All Years	-1.7	0.8	0.0	0.0	0.0	0.0	0.5	-1.7				-2.5	0.0	
				56	All Years	-2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.2					-1.8	-1.9
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0
			Trinity River at Douglas City	52	All Years	-2.3	0.0	0.0	0.0	0.0	0.0	0.8	-1.3					0.0	0.0
				56	All Years	-3.4	0.0	0.0	0.0	0.0	0.0	0.0	1.0					0.0	1.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.9
			Trinity River at North Fork	52	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	0.0	-1.5					0.0	0.0
				56	All Years	-1.8	0.0	0.0	0.0	0.0	0.0	0.0	-0.5					0.0	-0.1
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.5
Adult Immigration and Holding (Summer-run)	June through August	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	52	All Years										1.6	1.3	-2.5		
				56	All Years										1.4	-1.3	-1.8		
				70	All Years										0.0	0.0	0.0		
			Trinity River at Douglas City	52	All Years											1.2	0.0	0.0	
				56	All Years										-0.4	0.0	0.0		
				70	All Years										0.0	0.0	0.0		
			Trinity River at North Fork	52	All Years											0.0	0.0	0.0	
				56	All Years										1.3	0.0	0.0		
				70	All Years										0.0	0.0	0.0		
Adult Spawning and egg incubation	October through June	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	52	All Years	-1.7	0.8	0.0	0.0	0.0	0.5	-1.7	0.1	1.6					
				54	All Years	-1.3	0.1	0.0	0.0	0.0	1.3	0.0	0.0	1.3					
				57	All Years	-1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0					
			Trinity River at Douglas City	60	All Years	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0				
				52	All Years	-2.3	0.0	0.0	0.0	0.0	0.8	-1.3	1.0	1.2					
				54	All Years	-0.6	0.0	0.0	0.0	0.0	0.0	-1.2	0.1	-0.4					
			Trinity River at North Fork	57	All Years	-3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.8					
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2					
				52	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	-1.5	0.0	0.0					
Trinity River at North Fork	54	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-0.7	0.3							
	57	All Years	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.3								
	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2								
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Trinity River at Douglas City	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	0.2	-0.2
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
			Trinity River at North Fork	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.2	1.3	0.2
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.7	0.2	0.9	
Trinity River at North Fork	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2			
	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Smolt Emigration	February through July	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	52	All Years						0.5	-1.7	0.1	1.6	1.3				
				55	All Years						0.0	0.8	0.0	1.1	-1.3				
				59	All Years						0.0	0.0	0.0	0.0	-1.3	-2.9			
			Trinity River at Douglas City	52	All Years							0.8	-1.3	1.0	1.2	0.0			
				55	All Years						0.0	-0.1	0.0	2.3	0.0				
				59	All Years						0.0	0.0	0.0	0.0	1.3				
			Trinity River at North Fork	52	All Years						0.0	0.0	-1.5	0.0	0.0	0.0			
				55	All Years						0.0	0.0	-0.6	1.2	0.2	0.0			
				59	All Years						0.0	0.0	0.0	0.0	1.2	0.0			

Table AQ-T-1-5e
Green Sturgeon in the Upper Trinity River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative										
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Adult Immigration and Holding	February through November	Monthly mean water temperatures (°F)	Trinity River at North Fork	61	All Years	0.0	0.0			0.0	0.0	0.0	0.0	0.0	-1.3	0.1	-2.3
			Trinity River at North Fork	66	All Years	0.0	0.0			0.0	0.0	0.0	0.0	-0.1	0.6	3.7	1.1
Adult Spawning	May through August	Monthly mean water temperatures (°F)	Trinity River at North Fork	68	All Years								0.0	0.0	-1.7	0.2	
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River at North Fork	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.6	3.7	1.1

Table AQ-T-1-5f
White Sturgeon in the Upper Trinity River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative										
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Adult Immigration and Holding	November through May	Monthly mean water temperatures (°F)	Trinity River at North Fork	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Adult Spawning	February through May	Monthly mean water temperatures (°F)	Trinity River at North Fork	61	All Years					0.0	0.0	0.0	0.0				
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River at North Fork	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.6	3.7	1.1

Table AQ-T-1-5g
Pacific Lamprey in the Upper Trinity River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Trinity River Below Lewiston Dam	50-64	All Years				0.0	0.0	-2.5	-2.5	1.2	-1.2	1.3	0.4	
			Trinity River at Douglas City	50-64	All Years				0.0	0.0	0.0	-2.1	-1.2	0.4	1.8	0.0	
			Trinity River at North Fork	50-64	All Years				0.0	0.0	0.3	0.0	0.0	-1.3	0.0	2.5	
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River Below Lewiston Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Trinity River at Douglas City	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
			Trinity River at North Fork	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2

*Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

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Alternative C Compared to No Action Alternative

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Table AQ-T-1-7c

Upper Klamath-Trinity River Fall-run Chinook Salmon in the Trinity River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative													
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	August through December	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	60	All Years	-0.9	0.0	0.0									-2.0	-1.5		
				64	All Years	0.0	0.0	0.0										-1.2	-1.5	
				68	All Years	0.0	0.0	0.0										0.0	-0.1	
			Trinity River at Douglas City	60	All Years	0.0	0.0	0.0											-3.8	-4.3
				64	All Years	0.0	0.0	0.0											-2.3	-0.5
				68	All Years	0.0	0.0	0.0											0.0	0.0
			Trinity River at North Fork	60	All Years	0.0	0.0	0.0											0.0	-3.8
				64	All Years	0.0	0.0	0.0											-1.9	-0.6
				68	All Years	0.0	0.0	0.0											-2.1	0.0
Adult Spawning and egg incubation	October through June	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	56	All Years	-5.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	1.4						
				58	All Years	-4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.1						
				60	All Years	-0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Trinity River at Douglas City	56	All Years	-6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1				
				58	All Years	-0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7				
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4				
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0				
			Trinity River at North Fork	56	All Years	-2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	0.0	0.0	0.0	0.0	0.0	0.0
				58	All Years	-0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2			
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.3			
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	60	All Years	-0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-0.7	-2.0	-1.5			
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.4	-1.9		
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.1		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1		
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Trinity River at Douglas City	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.2	-3.8	-4.3	
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.7	-1.1	-1.3	-0.5	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.1	-1.9	-1.5		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Trinity River at North Fork	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	-3.8	
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.2	0.0	0.0	-0.9	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-1.2	2.5	-0.9	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.5	-2.1	0.0	
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Smolt Emigration	February through July	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	60	All Years						0.0	0.0	0.0	0.0	-1.0	-0.7				
				63	All Years							0.0	0.0	0.0	0.0	0.0	0.0			
				65	All Years							0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				68	All Years							0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				70	All Years							0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Trinity River at Douglas City	60	All Years							0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				63	All Years							0.0	0.0	0.0	0.0	0.0	-0.7	-1.1		
				65	All Years							0.0	0.0	0.0	0.0	0.0	-1.1			
				68	All Years							0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				70	All Years							0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Trinity River at North Fork	60	All Years							0.0	0.0	0.0	0.0	0.0	0.2	0.0		
				63	All Years							0.0	0.0	0.0	0.0	0.0	-1.2	0.0		
				65	All Years							0.0	0.0	0.0	0.0	-0.4	-1.2			
				68	All Years							0.0	0.0	0.0	0.0	0.0	-2.5			
				70	All Years							0.0	0.0	0.0	0.0	0.0	0.0			

Table AQ-T-1-7e
Green Sturgeon in the Upper Trinity River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative											
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	February through November	Monthly mean water temperatures (°F)	Trinity River at North Fork	61	All Years	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	-1.3	0.4	-2.3
			Trinity River at North Fork	66	All Years	0.0	0.0			0.0	0.0	0.0	0.0	0.0	-0.1	1.8	2.5	-0.2
Adult Spawning	May through August	Monthly mean water temperatures (°F)	Trinity River at North Fork	68	All Years								0.0	0.0	-2.5	-2.1		
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River at North Fork	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	1.8	2.5	-0.2	

Table AQ-T-1-7f

White Sturgeon in the Upper Trinity River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative										
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Adult Immigration and Holding	November through May	Monthly mean water temperatures (°F)	Trinity River at North Fork	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Adult Spawning	February through May	Monthly mean water temperatures (°F)	Trinity River at North Fork	61	All Years					0.0	0.0	0.0	0.0				
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River at North Fork	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	1.8	2.5	-0.2

Table AQ-T-1-7g

Pacific Lamprey in the Upper Trinity River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Trinity River Below Lewiston Dam	50-64	All Years				0.0	0.0	-3.3	-2.5	1.2	0.0	2.5	2.2	
			Trinity River at Douglas City	50-64	All Years				0.0	0.0	0.0	-2.1	-1.2	0.1	1.6	2.3	
			Trinity River at North Fork	50-64	All Years				0.0	0.0	0.3	0.0	0.0	-2.5	0.0	1.9	
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River Below Lewiston Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Trinity River at Douglas City	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Trinity River at North Fork	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

*Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

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Alternative D Compared to No Action Alternative

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Table AQ-T-1-9b

Upper Klamath-Trinity River Spring-run Chinook Salmon in the Upper Trinity River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative														
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep			
Adult Immigration and Holding	April through September	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	60	All Years								0.0	0.0	-1.0	-0.7	-0.7	0.2			
				64	All Years									0.0	0.0	0.0	0.0	-1.0	-1.8		
				68	All Years									0.0	0.0	0.0	0.0	0.0	-0.1		
			Trinity River at Douglas City	60	All Years										0.0	0.0	1.2	-1.3	-3.2	-0.9	
				64	All Years										0.0	0.0	-0.1	-1.3	-0.6	-0.5	
				68	All Years										0.0	0.0	0.0	0.0	0.0	0.0	
			Trinity River at North Fork	60	All Years										0.0	0.0	-0.2	0.0	0.0	0.0	
				64	All Years										0.0	0.0	1.9	-1.3	-1.9	-0.8	
				68	All Years										0.0	0.0		-1.9	-0.9	0.0	
Adult Spawning and egg incubation	August through November	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	56	All Years	-4.5	0.0											-1.4	2.7		
				58	All Years	-4.4	0.0												-1.5	-0.8	
				60	All Years	-0.9	0.0												-0.7	0.2	
			Trinity River at Douglas City	62	All Years	0.0	0.0													-0.4	-1.3
				56	All Years	-6.0	0.0													0.1	-0.9
				58	All Years	-0.6	0.0													-6.3	2.3
			Trinity River at North Fork	60	All Years	0.0	0.0													-3.2	-0.9
				62	All Years	0.0	0.0													-3.2	-0.7
				56	All Years	-3.1	0.0													0.0	-0.1
Trinity River at North Fork	58	All Years	-0.6	0.0													0.0	3.7			
	60	All Years	0.0	0.0													0.0	0.0			
	62	All Years	0.0	0.0													0.0	0.2			
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	60	All Years	-0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-0.7	-0.7	0.2			
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-1.6	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.1	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Trinity River at Douglas City	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	-1.3	-3.2	-0.9	
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.7	0.1	0.0	-0.3	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-0.6	-1.5		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Trinity River at North Fork	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	0.0	0.0	
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.1	-1.2	-4.2	0.1	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-3.3	1.3	-0.8	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.9	-0.9	0.0	
Smolt Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				60	All Years	-0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-0.7	-0.7	0.2	
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-1.6
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.1
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
			Trinity River at Douglas City	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	-1.3	-3.2	-0.9
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.7	0.1	0.0	-0.3
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-0.6	-1.5	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Trinity River at North Fork	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	0.0	0.0
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.1	-1.2	-4.2	0.1
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-3.3	1.3	-0.8

Table AQ-T-1-9c

Upper Klamath-Trinity River Fall-run Chinook Salmon in the Trinity River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative													
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	August through December	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	60	All Years	-0.9	0.0	0.0									-0.7	0.2		
				64	All Years	0.0	0.0	0.0										-1.0	-1.8	
				68	All Years	0.0	0.0	0.0										0.0	-0.1	
			Trinity River at Douglas City	60	All Years	0.0	0.0	0.0											-3.2	-0.9
				64	All Years	0.0	0.0	0.0											-0.6	-0.5
				68	All Years	0.0	0.0	0.0											0.0	0.0
			Trinity River at North Fork	60	All Years	0.0	0.0	0.0											0.0	0.0
				64	All Years	0.0	0.0	0.0											-1.9	-0.8
				68	All Years	0.0	0.0	0.0											-0.9	0.0
Adult Spawning and egg incubation	October through June	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	56	All Years	-4.5	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.3						
				58	All Years	-4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.8						
				60	All Years	-0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
			Trinity River at Douglas City	56	All Years	-6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	-1.4					
				58	All Years	-0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2					
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.2					
			Trinity River at North Fork	56	All Years	-3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0					
				58	All Years	-0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.2					
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2					
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.3					
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	60	All Years	-0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-0.7	-0.7	0.2			
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-1.6		
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.1	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Trinity River at Douglas City	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	-1.3	-3.2	-0.9		
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.7	0.1	0.0	-0.3		
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-0.6	-1.5		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Trinity River at North Fork	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	0.0	0.0	0.0
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.1	-1.2	-4.2	0.1		
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-3.3	1.3	-0.8		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.9	-0.9	0.0	0.0	
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Smolt Emigration	February through July	Monthly mean water temperatures (°F)	Trinity River below Lewiston Dam	60	All Years						0.0	0.0	0.0	-1.0	-0.7					
				63	All Years							0.0	0.0	0.0	0.0	0.0	0.0			
				65	All Years							0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				68	All Years							0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				70	All Years							0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Trinity River at Douglas City	60	All Years								0.0	0.0	0.0	0.0	1.2	-1.3		
				63	All Years								0.0	0.0	0.0	0.0	-0.7	0.1		
				65	All Years								0.0	0.0	0.0	0.0	-1.0			
				68	All Years								0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				70	All Years								0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Trinity River at North Fork	60	All Years												-0.2	0.0		
				63	All Years												-1.1	-1.2		
				65	All Years												0.0	-3.3		
				68	All Years												0.0	-1.9		
				70	All Years												0.0	0.0		

Table AQ-T-1-9e
Green Sturgeon in the Upper Trinity River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative											
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	February through November	Monthly mean water temperatures (°F)	Trinity River at North Fork	61	All Years	0.0	0.0			0.0	0.0	0.0	0.0	0.0	-1.2	-2.5	0.1	0.2
			Trinity River at North Fork	66	All Years	0.0	0.0			0.0	0.0	0.0	0.0	0.0	-0.1	0.6	1.2	-0.2
Adult Spawning	May through August	Monthly mean water temperatures (°F)	Trinity River at North Fork	68	All Years								0.0	0.0	-1.9	-0.9		
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River at North Fork	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.6	1.2	-0.2

Table AQ-T-1-9f

White Sturgeon in the Upper Trinity River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative										
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Adult Immigration and Holding	November through May	Monthly mean water temperatures (°F)	Trinity River at North Fork	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Adult Spawning	February through May	Monthly mean water temperatures (°F)	Trinity River at North Fork	61	All Years					0.0	0.0	0.0	0.0				
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River at North Fork	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.6	1.2	-0.2

Table AQ-T-1-9g
Pacific Lamprey in the Upper Trinity River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Trinity River Below Lewiston Dam	50-64	All Years				0.0	0.0	-3.7	-1.3	0.0	-1.2	-1.2	-11.1	
			Trinity River at Douglas City	50-64	All Years				0.0	0.0	0.0	-2.1	-1.2	0.1	1.3	0.6	
			Trinity River at North Fork	50-64	All Years				0.0	0.0	0.3	0.0	0.0	-1.9	1.3	1.9	
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Trinity River Below Lewiston Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Trinity River at Douglas City	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Trinity River at North Fork	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

*Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

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Appendix 12E
Fisheries Water Temperature
Assessment Summary Tables
Clear Creek

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Alternative A Compared to No Action Alternative

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Table AQ-T-2-3a

Spring-run Chinook Salmon in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative												
			Description				Value	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	April through October	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years	0.0							0.0	0.0	0.0	-0.5	0.0	-2.0	
				64	All Years	0.0								0.0	0.0	0.0	0.0	0.0	0.0
				68	All Years	0.0								0.0	0.0	0.0	0.0	0.0	0.0
			Clear Creek at Igo	60	All Years	-0.5								0.0	0.0	0.0	-0.5	-1.2	-1.5
				64	All Years	0.0								0.0	0.0	0.0	-1.7	-0.1	-0.1
				68	All Years	0.0								0.0	0.0	0.0	-0.2	0.0	0.0
			Mouth of Clear Creek	60	All Years	-2.2								0.0	0.0	0.5	-0.2	0.1	-2.6
				64	All Years	0.0								0.0	0.0	-0.4	-1.0	0.7	-1.3
				68	All Years	0.0								0.0	0.0	0.0	-0.1	-1.1	0.0
Adult Spawning and Embryo Incubation	August through March	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	56	All Years	-2.8	0.0	0.0	0.0	0.0	0.0						-2.1	-5.7	
				58	All Years	1.2	0.0	0.0	0.0	0.0	0.0							-2.2	-0.7
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	-2.0
			Clear Creek at Igo	62	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	-0.7
				56	All Years	-0.3	0.0	0.0	0.0	0.0	0.0							0.3	-1.9
				58	All Years	-2.2	0.0	0.0	0.0	0.0	0.0							3.2	-5.0
			Mouth of Clear Creek	60	All Years	-0.5	0.0	0.0	0.0	0.0	0.0							-1.2	-1.5
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0							-2.8	-1.2
				56	All Years	-3.5	0.0	0.0	0.0	0.0	0.0							0.0	-0.6
Juvenile Rearing and Emigration	August through April	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	58	All Years	-1.3	0.0	0.0	0.0	0.0	0.0					0.0	0.6		
				60	All Years	-2.2	0.0	0.0	0.0	0.0	0.0						0.1	-2.6	
				62	All Years	-1.2	0.0	0.0	0.0	0.0	0.0						2.6	-2.7	
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0	-2.0
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0	-0.3
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0	0.0
Smolt Emigration	May through January	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0						0.0	0.0	
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	0.0
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	0.0
			Clear Creek at Igo	60	All Years	-0.5	0.0	0.0	0.0	0.0	0.0							-1.2	-1.5
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0							-0.3	-0.6
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.1	0.0
			Mouth of Clear Creek	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	0.0
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	0.0
Smolt Emigration	May through January	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years	-2.2	0.0	0.0	0.0	0.0	0.0						0.1	-2.6	
				63	All Years	-0.5	0.0	0.0	0.0	0.0	0.0							-0.2	-2.4
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0							-1.4	-0.7
			Clear Creek at Igo	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0							-1.1	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0							-0.1	0.0
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	0.0
				60	All Years	-2.2	0.0	0.0	0.0	0.0	0.0							0.0	0.0
				63	All Years	-0.5	0.0	0.0	0.0	0.0	0.0							0.0	0.0
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	0.0
Mouth of Clear Creek	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0							-0.2	0.0			
	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0							-0.2	0.0			
	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	0.0			
	60	All Years	-2.2	0.0	0.0	0.0	0.0	0.0							0.0	0.0			
	63	All Years	-0.5	0.0	0.0	0.0	0.0	0.0							0.0	0.0			
	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	0.0			

Table AQ-T-2-3b

Fall-run Chinook Salmon in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative															
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep				
Adult Immigration and Holding	September through December	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years	0.0	0.0	0.0										-2.0			
				64	All Years	0.0	0.0	0.0											0.0		
				68	All Years	0.0	0.0	0.0											0.0		
			Clear Creek at Igo	60	All Years	-0.5	0.0	0.0												-1.5	
				64	All Years	0.0	0.0	0.0												-0.1	
				68	All Years	0.0	0.0	0.0												0.0	
			Mouth of Clear Creek	60	All Years	-2.2	0.0	0.0													-2.6
				64	All Years	0.0	0.0	0.0													-1.3
				68	All Years	0.0	0.0	0.0													0.0
Adult Spawning and Embryo Incubation	October through March	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	56	All Years	-2.8	0.0	0.0	0.0	0.0	0.0								-5.7		
				58	All Years	1.2	0.0	0.0	0.0	0.0	0.0	0.0								-0.7	
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0								-2.0	
			Clear Creek at Igo	62	All Years	0.0	0.0	0.0	0.0	0.0	0.0										-0.7
				56	All Years	-0.3	0.0	0.0	0.0	0.0	0.0	0.0									-1.9
				58	All Years	-2.2	0.0	0.0	0.0	0.0	0.0	0.0									-5.0
			Mouth of Clear Creek	60	All Years	-0.5	0.0	0.0	0.0	0.0	0.0										-1.5
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0										-1.2
				56	All Years	-3.5	0.0	0.0	0.0	0.0	0.0	0.0									-0.6
Juvenile Rearing and Emigration	October through May	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	58	All Years	-1.3	0.0	0.0	0.0	0.0	0.0								0.6		
				60	All Years	-2.2	0.0	0.0	0.0	0.0	0.0									-2.6	
				62	All Years	-1.2	0.0	0.0	0.0	0.0	0.0									-2.7	
			Clear Creek at Igo	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								0.0
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							0.0
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							0.0
			Mouth of Clear Creek	60	All Years	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							0.0
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							0.0
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							0.0
Smolt Emigration	January through June	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years				0.0	0.0	0.0	0.0	0.0	0.0					0.0		
				63	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
				65	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	
			Clear Creek at Igo	68	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0
				70	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0
				75	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0
			Mouth of Clear Creek	60	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.5
				63	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					1.1
				65	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					-0.8
Mouth of Clear Creek	68	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0			
	70	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0			
	75	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0			

Table AQ-T-2-3c

Late Fall-run Chinook Salmon in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location		Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative													
			Description	Criteria Value	Range	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Immigration and Holding	December through April	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years			0.0	0.0	0.0	0.0	0.0						
				64	All Years			0.0	0.0	0.0	0.0	0.0						
				68	All Years			0.0	0.0	0.0	0.0	0.0						
			Clear Creek at Igo	60	All Years			0.0	0.0	0.0	0.0	0.0						
				64	All Years			0.0	0.0	0.0	0.0	0.0						
				68	All Years			0.0	0.0	0.0	0.0	0.0						
			Mouth of Clear Creek	60	All Years			0.0	0.0	0.0	0.0	0.0						
				64	All Years			0.0	0.0	0.0	0.0	0.0						
				68	All Years			0.0	0.0	0.0	0.0	0.0						
Adult Spawning and Embryo Incubation	January through April	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	56	All Years				0.0	0.0	0.0	0.0						
				58	All Years				0.0	0.0	0.0	0.0						
				60	All Years				0.0	0.0	0.0	0.0						
			Clear Creek at Igo	62	All Years				0.0	0.0	0.0	0.0						
				56	All Years				0.0	0.0	0.0	0.0						
				58	All Years				0.0	0.0	0.0	0.0						
			Mouth of Clear Creek	60	All Years				0.0	0.0	0.0	0.0						
				62	All Years				0.0	0.0	0.0	0.0						
				62	All Years				0.0	0.0	0.0	0.0						
Juvenile Rearing and Emigration	February through May	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years					0.0	0.0	0.0	0.0					
				63	All Years					0.0	0.0	0.0	0.0					
				65	All Years					0.0	0.0	0.0	0.0					
				68	All Years					0.0	0.0	0.0	0.0					
				70	All Years					0.0	0.0	0.0	0.0					
			Clear Creek at Igo	75	All Years					0.0	0.0	0.0	0.0					
				60	All Years					0.0	0.0	0.0	0.0					
				63	All Years					0.0	0.0	0.0	0.0					
				65	All Years					0.0	0.0	0.0	0.0					
				68	All Years					0.0	0.0	0.0	0.0					
			Mouth of Clear Creek	70	All Years					0.0	0.0	0.0	0.0					
				75	All Years					0.0	0.0	0.0	0.0					
				60	All Years					0.0	0.0	0.0	0.0					
				63	All Years					0.0	0.0	0.0	0.0					
				65	All Years					0.0	0.0	0.0	0.0					
Smolt Emigration	April through June	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years							0.0	0.0	0.0				
				63	All Years							0.0	0.0	0.0				
				65	All Years							0.0	0.0	0.0				
				68	All Years							0.0	0.0	0.0				
				70	All Years							0.0	0.0	0.0				
			Clear Creek at Igo	75	All Years							0.0	0.0	0.0				
				60	All Years							0.0	0.0	0.0				
				63	All Years							0.0	0.0	0.0				
				65	All Years							0.0	0.0	0.0				
				68	All Years							0.0	0.0	0.0				
			Mouth of Clear Creek	70	All Years							0.0	0.0	0.0				
				75	All Years							0.0	0.0	0.0				
				60	All Years							0.0	0.0	0.0	0.5			
				63	All Years							0.0	0.0	0.0	1.1			
				65	All Years							0.0	0.0	0.0	-0.8			
68	All Years							0.0	0.0	0.0	0.0							
70	All Years							0.0	0.0	0.0	0.0							
75	All Years							0.0	0.0	0.0	0.0							

Table AQ-T-2-3e

River Lamprey in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	February through July	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	50-64	All Years						0.0	0.0	-0.2	0.6	-0.4	1.2		
			Clear Creek at Igo	50-64	All Years						0.0	0.0	-0.9	0.4	0.1	1.7		
			Mouth of Clear Creek	50-64	All Years						0.0	-0.2	-4.5	0.1	0.4	1.0		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Clear Creek at Igo	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0
			Mouth of Clear Creek	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-2-3f

Pacific Lamprey in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	50-64	All Years					0.0	0.0	0.0	-0.2	0.6	-0.4	1.2	1.9	
			Clear Creek at Igo	50-64	All Years					0.0	0.0	0.0	-0.9	0.4	0.1	1.7	0.1	
			Mouth of Clear Creek	50-64	All Years					0.0	0.0	-0.2	-4.5	0.1	0.4	1.0	-0.7	
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Clear Creek at Igo	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	
			Mouth of Clear Creek	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-2-3g
Hardhead in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adults and Other Lifestages	Year-round	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Clear Creek at Igo	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.1	0.0
			Mouth of Clear Creek	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.8	4.5	-1.4
Adult Spawning	April through June	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	59-64	All Years								0.0	0.0	0.0		
			Clear Creek at Igo	59-64	All Years								0.0	0.0	0.8		
			Mouth of Clear Creek	59-64	All Years							0.0	0.0	2.8			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

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Alternative B Compared to No Action Alternative

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Table AQ-T-2-5a
Spring-run Chinook Salmon in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative												
			Description				Value	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	April through October	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years	0.0							0.0	0.0	0.0	-0.5	0.0	-0.6	
				64	All Years	0.0								0.0	0.0	0.0	0.0	0.0	0.2
				68	All Years	0.0								0.0	0.0	0.0	0.0	0.0	0.0
			Clear Creek at Igo	60	All Years	-0.5								0.0	0.0	0.0	-2.5	-0.5	0.2
				64	All Years	0.0								0.0	0.0	0.0	-0.4	0.0	0.3
				68	All Years	0.0								0.0	0.0	0.0	-0.1	0.0	0.0
			Mouth of Clear Creek	60	All Years	-2.4								0.0	0.0	-0.1	0.1	0.4	-5.7
				64	All Years	0.0								0.0	0.0	0.0	-0.9	1.5	-0.3
				68	All Years	0.0								0.0	0.0	0.0	-2.3	-1.1	0.0
Adult Spawning and Embryo Incubation	August through March	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	56	All Years	-3.3	0.0	0.0	0.0	0.0	0.0						-0.5	-6.8	
				58	All Years	1.2	0.0	0.0	0.0	0.0	0.0							-1.5	-0.5
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	-0.6
			Clear Creek at Igo	62	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	0.0
				56	All Years	0.2	0.0	0.0	0.0	0.0	0.0							2.3	-1.3
				58	All Years	-3.2	0.0	0.0	0.0	0.0	0.0							0.9	-4.4
			Mouth of Clear Creek	60	All Years	-0.5	0.0	0.0	0.0	0.0	0.0							-0.5	0.2
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0							-2.6	-0.2
				56	All Years	-3.2	0.0	0.0	0.0	0.0	0.0							0.0	-0.9
Mouth of Clear Creek	58	All Years	-0.8	0.0	0.0	0.0	0.0	0.0							0.0	1.2			
	60	All Years	-2.4	0.0	0.0	0.0	0.0	0.0							0.4	-5.7			
	62	All Years	-1.2	0.0	0.0	0.0	0.0	0.0							1.1	-1.7			
Juvenile Rearing and Emigration	August through April	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	-0.6		
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.2	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
			Clear Creek at Igo	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
				60	All Years	-0.5	0.0	0.0	0.0	0.0	0.0	0.0					-0.5	0.2	
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0					-0.2	0.1	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.1	0.1	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
			Mouth of Clear Creek	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
				60	All Years	-2.4	0.0	0.0	0.0	0.0	0.0	0.0					0.4	-5.7	
				63	All Years	-0.5	0.0	0.0	0.0	0.0	0.0	0.0					-0.3	-1.0	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0					2.2	0.0	
Smolt Emigration	May through January	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0		
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0		
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0		
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0		
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0		
			Clear Creek at Igo	65	All Years	-0.5	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	-0.5	0.2
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	-1.6	-0.2
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	-0.1	0.1
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	-0.1	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	-0.1	0.0
Mouth of Clear Creek	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0			
	60	All Years	-2.4	0.0	0.0	0.0	0.0	0.0	0.0				0.0	-0.1	0.1	0.4	-5.7		
	63	All Years	-0.5	0.0	0.0	0.0	0.0	0.0	0.0				0.0	-0.2	2.7	-0.3	-1.0		
	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	-0.7	5.6	2.2	0.0		
	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	-2.3	-1.1	0.0		
Mouth of Clear Creek	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0			
	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0			
	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0			

Table AQ-T-2-5b

Fall-run Chinook Salmon in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative													
			Description				Value	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Immigration and Holding	September through December	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years	0.0	0.0	0.0										-0.6		
				64	All Years	0.0	0.0	0.0											0.2	
				68	All Years	0.0	0.0	0.0											0.0	
			Clear Creek at Igo	60	All Years	-0.5	0.0	0.0												0.2
				64	All Years	0.0	0.0	0.0												0.3
				68	All Years	0.0	0.0	0.0												0.0
			Mouth of Clear Creek	60	All Years	-2.4	0.0	0.0												-5.7
				64	All Years	0.0	0.0	0.0												-0.3
				68	All Years	0.0	0.0	0.0												0.0
Adult Spawning and Embryo Incubation	October through March	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	56	All Years	-3.3	0.0	0.0	0.0	0.0	0.0							-6.8		
				58	All Years	1.2	0.0	0.0	0.0	0.0	0.0	0.0							-0.5	
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0							-0.6	
			Clear Creek at Igo	62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0								0.0
				56	All Years	0.2	0.0	0.0	0.0	0.0	0.0	0.0								-1.3
				58	All Years	-3.2	0.0	0.0	0.0	0.0	0.0	0.0								-4.4
			Mouth of Clear Creek	60	All Years	-0.5	0.0	0.0	0.0	0.0	0.0	0.0								0.2
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0								-0.2
				56	All Years	-3.2	0.0	0.0	0.0	0.0	0.0	0.0								-0.9
Juvenile Rearing and Emigration	October through May	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	58	All Years	-0.8	0.0	0.0	0.0	0.0	0.0								1.2	
				60	All Years	-2.4	0.0	0.0	0.0	0.0	0.0	0.0								-5.7
				62	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	0.0								-1.7
			Clear Creek at Igo	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
			Mouth of Clear Creek	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Smolt Emigration	January through June	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years				0.0	0.0	0.0	0.0	0.0	0.0						
				63	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0					
				65	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
			Clear Creek at Igo	68	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
				70	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
				75	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
			Mouth of Clear Creek	60	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				-0.1
				63	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				-0.2
				65	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				-0.7
Mouth of Clear Creek	68	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0			
	70	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0			
	75	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0			

Table AQ-T-2-5c

Late Fall-run Chinook Salmon in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location		Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative															
			Description	Criteria Value	Range	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep			
Adult Immigration and Holding	December through April	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years			0.0	0.0	0.0	0.0	0.0								
				64	All Years			0.0	0.0	0.0	0.0	0.0								
				68	All Years			0.0	0.0	0.0	0.0	0.0								
			Clear Creek at Igo	60	All Years			0.0	0.0	0.0	0.0	0.0								
				64	All Years			0.0	0.0	0.0	0.0	0.0								
				68	All Years			0.0	0.0	0.0	0.0	0.0								
			Mouth of Clear Creek	60	All Years			0.0	0.0	0.0	0.0	0.0								
				64	All Years			0.0	0.0	0.0	0.0	0.0								
				68	All Years			0.0	0.0	0.0	0.0	0.0								
Adult Spawning and Embryo Incubation	January through April	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	56	All Years				0.0	0.0	0.0	0.0								
				58	All Years				0.0	0.0	0.0	0.0								
				60	All Years				0.0	0.0	0.0	0.0								
			Clear Creek at Igo	56	All Years				0.0	0.0	0.0	0.0								
				58	All Years				0.0	0.0	0.0	0.0								
				60	All Years				0.0	0.0	0.0	0.0								
			Mouth of Clear Creek	56	All Years				0.0	0.0	0.0	0.0								
				58	All Years				0.0	0.0	0.0	0.0								
				60	All Years				0.0	0.0	0.0	0.0								
Juvenile Rearing and Emigration	February through May	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years					0.0	0.0	0.0	0.0							
				63	All Years					0.0	0.0	0.0	0.0							
				65	All Years					0.0	0.0	0.0	0.0							
				68	All Years					0.0	0.0	0.0	0.0							
				70	All Years					0.0	0.0	0.0	0.0							
			Clear Creek at Igo	60	All Years					0.0	0.0	0.0	0.0							
				63	All Years					0.0	0.0	0.0	0.0							
				65	All Years					0.0	0.0	0.0	0.0							
				68	All Years					0.0	0.0	0.0	0.0							
				70	All Years					0.0	0.0	0.0	0.0							
			Mouth of Clear Creek	60	All Years					0.0	0.0	0.0	0.0							
				63	All Years					0.0	0.0	0.0	0.0							
				65	All Years					0.0	0.0	0.0	0.0							
				68	All Years					0.0	0.0	0.0	0.0							
				70	All Years					0.0	0.0	0.0	0.0							
Smolt Emigration	April through June	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years							0.0	0.0	0.0						
				63	All Years							0.0	0.0	0.0						
				65	All Years							0.0	0.0	0.0						
				68	All Years							0.0	0.0	0.0						
				70	All Years							0.0	0.0	0.0						
			Clear Creek at Igo	60	All Years									0.0	0.0	0.0				
				63	All Years									0.0	0.0	0.0				
				65	All Years									0.0	0.0	0.0				
				68	All Years									0.0	0.0	0.0				
				70	All Years									0.0	0.0	0.0				
			Mouth of Clear Creek	60	All Years										0.0	0.0	-0.1			
				63	All Years										0.0	0.0	-0.2			
				65	All Years										0.0	0.0	-0.7			
				68	All Years										0.0	0.0	0.0			
				70	All Years										0.0	0.0	0.0			
75	All Years										0.0	0.0	0.0							

Table AQ-T-2-5e

River Lamprey in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	February through July	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	50-64	All Years						0.0	0.0	-1.3	4.1	2.0	3.6		
			Clear Creek at Igo	50-64	All Years						0.0	0.0	-0.9	0.4	0.0	0.4		
			Mouth of Clear Creek	50-64	All Years						0.0	-0.2	-1.3	0.0	0.0	0.9		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Clear Creek at Igo	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0
			Mouth of Clear Creek	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-2-5f

Pacific Lamprey in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	50-64	All Years					0.0	0.0	0.0	-1.3	4.1	2.0	3.6	1.7	
			Clear Creek at Igo	50-64	All Years					0.0	0.0	0.0	-0.9	0.4	0.0	0.4	0.0	
			Mouth of Clear Creek	50-64	All Years					0.0	0.0	-0.2	-1.3	0.0	0.0	0.9	-1.5	
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Clear Creek at Igo	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	
			Mouth of Clear Creek	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-2-5g
Hardhead in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adults and Other Lifestages	Year-round	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Clear Creek at Igo	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.1
			Mouth of Clear Creek	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.7	5.6	2.2
Adult Spawning	April through June	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	59-64	All Years								0.0	0.0	0.0		
			Clear Creek at Igo	59-64	All Years								0.0	0.0	-0.5		
			Mouth of Clear Creek	59-64	All Years							0.0	0.0	2.4			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

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Alternative C Compared to No Action Alternative

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Table AQ-T-2-7a

Spring-run Chinook Salmon in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative													
			Description				Value	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Immigration and Holding	April through October	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years	0.1							0.0	0.0	0.0	-0.5	0.0	-2.0		
				64	All Years	0.0								0.0	0.0	0.0	0.0	0.0	0.0	
				68	All Years	0.0								0.0	0.0	0.0	0.0	0.0	0.0	
			Clear Creek at Igo	60	All Years	-0.1									0.0	0.0	0.0	-2.1	-2.3	-0.7
				64	All Years	0.0									0.0	0.0	0.0	-0.3	-0.1	-0.1
				68	All Years	0.0									0.0	0.0	0.0	-0.1	0.0	0.0
			Mouth of Clear Creek	60	All Years	-2.2									0.0	0.0	1.6	0.0	0.3	-6.1
				64	All Years	0.0									0.0	0.0	-1.4	0.0	0.7	-1.3
				68	All Years	0.0									0.0	0.0	0.0	-1.2	-1.2	0.0
Adult Spawning and Embryo Incubation	August through March	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	56	All Years	-4.8	0.0	0.0	0.0	0.0	0.0						-2.4	-6.2		
				58	All Years	0.9	0.0	0.0	0.0	0.0	0.0							-2.2	-0.6	
				60	All Years	0.1	0.0	0.0	0.0	0.0	0.0	0.0						0.0	-2.0	
			Clear Creek at Igo	62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0	0.0	-0.7
				56	All Years	-2.6	0.0	0.0	0.0	0.0	0.0	0.0						-1.4	-2.6	
				58	All Years	-3.5	0.0	0.0	0.0	0.0	0.0	0.0						0.5	-5.1	
			Mouth of Clear Creek	60	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0						-2.3	-0.7	
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0						-2.8	-1.2	
				56	All Years	-2.8	0.0	0.0	0.0	0.0	0.0	0.0						0.0	-3.6	
Mouth of Clear Creek	58	All Years	-0.3	0.0	0.0	0.0	0.0	0.0	0.0						0.0	-1.4				
	60	All Years	-2.2	0.0	0.0	0.0	0.0	0.0	0.0						0.3	-6.1				
	62	All Years	-1.0	0.0	0.0	0.0	0.0	0.0	0.0						2.0	-1.8				
Juvenile Rearing and Emigration	August through April	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years	0.1	0.0	0.0	0.0	0.0	0.0	0.0					0.0	-2.0		
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	-0.3	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
			Clear Creek at Igo	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
				60	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0					-2.3	-0.7	
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					-0.3	-0.6	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.1	0.0	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
			Mouth of Clear Creek	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
				60	All Years	-2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.3	-6.1	
				63	All Years	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	-2.9	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					-0.4	-0.7	
Smolt Emigration	May through January	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0		
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0		
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
				60	All Years	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	-2.0		
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Clear Creek at Igo	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	
				60	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0					-2.1	-2.3	-0.7
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					-1.1	-0.3	-0.6
Mouth of Clear Creek	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					-0.1	0.1	0.0			
	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					-0.1	0.0	0.0			
	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					-0.1	0.0	0.0			
	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	0.0			
	60	All Years	-2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	1.6	0.0	0.3	-6.1	
Mouth of Clear Creek	63	All Years	-0.5	0.0	0.0	0.0	0.0	0.0	0.0						0.0	-0.2	2.2	0.0	-2.9	
	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0	-0.9	3.8	-0.4	-0.7	
	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0	0.0	-1.2	-1.2	0.0	
	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0	0.0	0.0	-0.1	0.0	
	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0	0.0	0.0	0.0	0.0	

Table AQ-T-2-7c

Late Fall-run Chinook Salmon in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location		Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative													
			Description	Criteria Value	Range	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Immigration and Holding	December through April	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years			0.0	0.0	0.0	0.0	0.0						
				64	All Years			0.0	0.0	0.0	0.0	0.0						
				68	All Years			0.0	0.0	0.0	0.0	0.0						
			Clear Creek at Igo	60	All Years			0.0	0.0	0.0	0.0	0.0						
				64	All Years			0.0	0.0	0.0	0.0	0.0						
				68	All Years			0.0	0.0	0.0	0.0	0.0						
			Mouth of Clear Creek	60	All Years			0.0	0.0	0.0	0.0	0.0						
				64	All Years			0.0	0.0	0.0	0.0	0.0						
				68	All Years			0.0	0.0	0.0	0.0	0.0						
Adult Spawning and Embryo Incubation	January through April	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	56	All Years				0.0	0.0	0.0	0.0						
				58	All Years				0.0	0.0	0.0	0.0						
				60	All Years				0.0	0.0	0.0	0.0						
			Clear Creek at Igo	62	All Years				0.0	0.0	0.0	0.0						
				56	All Years				0.0	0.0	0.0	0.0						
				58	All Years				0.0	0.0	0.0	0.0						
			Mouth of Clear Creek	60	All Years				0.0	0.0	0.0	0.0						
				62	All Years				0.0	0.0	0.0	0.0						
				60	All Years				0.0	0.0	0.0	0.0						
Juvenile Rearing and Emigration	February through May	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years					0.0	0.0	0.0	0.0					
				63	All Years					0.0	0.0	0.0	0.0					
				65	All Years					0.0	0.0	0.0	0.0					
				68	All Years					0.0	0.0	0.0	0.0					
				70	All Years					0.0	0.0	0.0	0.0					
			Clear Creek at Igo	75	All Years					0.0	0.0	0.0	0.0					
				60	All Years					0.0	0.0	0.0	0.0					
				63	All Years					0.0	0.0	0.0	0.0					
				65	All Years					0.0	0.0	0.0	0.0					
				68	All Years					0.0	0.0	0.0	0.0					
			Mouth of Clear Creek	70	All Years					0.0	0.0	0.0	0.0					
				75	All Years					0.0	0.0	0.0	0.0					
				60	All Years					0.0	0.0	0.0	0.0					
				63	All Years					0.0	0.0	0.0	0.0					
				65	All Years					0.0	0.0	0.0	0.0					
Smolt Emigration	April through June	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years							0.0	0.0	0.0				
				63	All Years							0.0	0.0	0.0				
				65	All Years							0.0	0.0	0.0				
				68	All Years							0.0	0.0	0.0				
				70	All Years							0.0	0.0	0.0				
			Clear Creek at Igo	75	All Years							0.0	0.0	0.0				
				60	All Years							0.0	0.0	0.0				
				63	All Years							0.0	0.0	0.0				
				65	All Years							0.0	0.0	0.0				
				68	All Years							0.0	0.0	0.0				
			Mouth of Clear Creek	70	All Years							0.0	0.0	0.0				
				75	All Years							0.0	0.0	0.0				
				60	All Years							0.0	0.0	0.0	1.6			
				63	All Years							0.0	0.0	0.0	-0.2			
				65	All Years							0.0	0.0	0.0	-0.9			
68	All Years							0.0	0.0	0.0	0.0							
70	All Years							0.0	0.0	0.0	0.0							
75	All Years							0.0	0.0	0.0	0.0							

Table AQ-T-2-7e
River Lamprey in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	February through July	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	50-64	All Years						0.0	0.0	-1.5	0.6	1.4	0.1		
			Clear Creek at Igo	50-64	All Years						0.0	0.0	-1.7	0.4	0.0	0.3		
			Mouth of Clear Creek	50-64	All Years						0.0	-0.2	-5.4	0.1	1.4	0.0		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Clear Creek at Igo	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0
			Mouth of Clear Creek	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-2-7f

Pacific Lamprey in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	50-64	All Years					0.0	0.0	0.0	-1.5	0.6	1.4	0.1	3.1	
			Clear Creek at Igo	50-64	All Years					0.0	0.0	0.0	-1.7	0.4	0.0	0.3	0.1	
			Mouth of Clear Creek	50-64	All Years					0.0	0.0	-0.2	-5.4	0.1	1.4	0.0	-0.7	
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Clear Creek at Igo	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	
			Mouth of Clear Creek	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-2-7g
Hardhead in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adults and Other Lifestages	Year-round	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Clear Creek at Igo	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.0	0.0
			Mouth of Clear Creek	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.9	3.8	-0.4	-0.7
Adult Spawning	April through June	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	59-64	All Years								0.0	0.0	0.0			
			Clear Creek at Igo	59-64	All Years								0.0	0.0	-1.6			
			Mouth of Clear Creek	59-64	All Years								0.0	0.0	3.9			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

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Alternative D Compared to No Action Alternative

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Table AQ-T-2-9a

Spring-run Chinook Salmon in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative												
			Description				Value	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	April through October	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years	0.0							0.0	0.0	0.0	-0.1	0.0	-0.6	
				64	All Years	0.0								0.0	0.0	0.0	0.0	0.0	0.0
				68	All Years	0.0								0.0	0.0	0.0	0.0	0.0	0.0
			Clear Creek at Igo	60	All Years	-0.3								0.0	0.0	0.0	-2.5	-1.6	-0.1
				64	All Years	0.0								0.0	0.0	0.0	0.1	-0.5	-0.1
				68	All Years	0.0								0.0	0.0	0.0	-0.1	0.0	0.0
			Mouth of Clear Creek	60	All Years	0.1								0.0	0.0	-0.7	-0.2	-0.5	-2.6
				64	All Years	0.0								0.0	0.0	-1.2	-2.4	2.4	-1.3
				68	All Years	0.0								0.0	0.0	0.0	-1.8	-1.0	0.0
Adult Spawning and Embryo Incubation	August through March	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	56	All Years	-2.1	0.0	0.0	0.0	0.0	0.0						-1.8	-3.7	
				58	All Years	0.9	0.0	0.0	0.0	0.0	0.0							-1.9	0.6
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	-0.6
			Clear Creek at Igo	62	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	-0.7
				56	All Years	-0.2	0.0	0.0	0.0	0.0	0.0							-4.6	-0.9
				58	All Years	-0.8	0.0	0.0	0.0	0.0	0.0							0.4	-2.7
			Mouth of Clear Creek	60	All Years	-0.3	0.0	0.0	0.0	0.0	0.0							-1.6	-0.1
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0							-2.8	-1.2
				56	All Years	-1.5	0.0	0.0	0.0	0.0	0.0							0.0	2.3
				58	All Years	-0.7	0.0	0.0	0.0	0.0	0.0					0.0	0.0		
				60	All Years	0.1	0.0	0.0	0.0	0.0	0.0						-0.5	-2.6	
				62	All Years	-1.0	0.0	0.0	0.0	0.0	0.0						2.0	-0.6	
Juvenile Rearing and Emigration	August through April	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	-0.6		
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	-0.3	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
			Clear Creek at Igo	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
				60	All Years	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0				-1.6	-0.1	
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				-0.6	-0.6	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
			Mouth of Clear Creek	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
				60	All Years	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0				-0.5	-2.6	
				63	All Years	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0				-4.3	-1.1	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.2	-0.7	
Smolt Emigration	May through January	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0		
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
				60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
			Clear Creek at Igo	65	All Years	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0				-2.5	-1.6	-0.1
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				-0.6	-0.6	-0.6
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				-0.1	0.0	0.0
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				-0.1	0.0	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
Mouth of Clear Creek	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0				
	60	All Years	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0				-0.7	-0.2	-0.5	-2.6		
	63	All Years	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.9	1.7	-4.3	-1.1		
	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				-0.8	-0.9	0.2	-0.7		
	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	-1.8	-1.0	0.0	
70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0	-0.1	0.0		
75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0		

Table AQ-T-2-9c

Late Fall-run Chinook Salmon in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location		Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative													
			Description	Criteria Value	Range	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Immigration and Holding	December through April	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years			0.0	0.0	0.0	0.0	0.0						
				64	All Years			0.0	0.0	0.0	0.0	0.0						
				68	All Years			0.0	0.0	0.0	0.0	0.0						
			Clear Creek at Igo	60	All Years			0.0	0.0	0.0	0.0	0.0						
				64	All Years			0.0	0.0	0.0	0.0	0.0						
				68	All Years			0.0	0.0	0.0	0.0	0.0						
			Mouth of Clear Creek	60	All Years			0.0	0.0	0.0	0.0	0.0						
				64	All Years			0.0	0.0	0.0	0.0	0.0						
				68	All Years			0.0	0.0	0.0	0.0	0.0						
Adult Spawning and Embryo Incubation	January through April	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	56	All Years				0.0	0.0	0.0	0.0						
				58	All Years				0.0	0.0	0.0	0.0						
				60	All Years				0.0	0.0	0.0	0.0						
			Clear Creek at Igo	62	All Years				0.0	0.0	0.0	0.0						
				56	All Years				0.0	0.0	0.0	0.0						
				58	All Years				0.0	0.0	0.0	0.0						
			Mouth of Clear Creek	60	All Years				0.0	0.0	0.0	0.0						
				62	All Years				0.0	0.0	0.0	0.0						
				62	All Years				0.0	0.0	0.0	0.0						
Juvenile Rearing and Emigration	February through May	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years					0.0	0.0	0.0	0.0					
				63	All Years					0.0	0.0	0.0	0.0					
				65	All Years					0.0	0.0	0.0	0.0					
				68	All Years					0.0	0.0	0.0	0.0					
				70	All Years					0.0	0.0	0.0	0.0					
			Clear Creek at Igo	75	All Years					0.0	0.0	0.0	0.0					
				60	All Years					0.0	0.0	0.0	0.0					
				63	All Years					0.0	0.0	0.0	0.0					
				65	All Years					0.0	0.0	0.0	0.0					
				68	All Years					0.0	0.0	0.0	0.0					
			Mouth of Clear Creek	70	All Years					0.0	0.0	0.0	0.0					
				75	All Years					0.0	0.0	0.0	0.0					
				60	All Years					0.0	0.0	0.0	0.0					
				63	All Years					0.0	0.0	0.0	0.0					
				65	All Years					0.0	0.0	0.0	0.0					
Smolt Emigration	April through June	Monthly mean water temperatures (°F)	Clear Creek below Whiskeytown Dam	60	All Years							0.0	0.0	0.0				
				63	All Years							0.0	0.0	0.0				
				65	All Years							0.0	0.0	0.0				
				68	All Years							0.0	0.0	0.0				
				70	All Years							0.0	0.0	0.0				
			Clear Creek at Igo	75	All Years							0.0	0.0	0.0				
				60	All Years							0.0	0.0	0.0				
				63	All Years							0.0	0.0	0.0				
				65	All Years							0.0	0.0	0.0				
				68	All Years							0.0	0.0	0.0				
			Mouth of Clear Creek	70	All Years							0.0	0.0	0.0				
				75	All Years							0.0	0.0	0.0				
				60	All Years							0.0	0.0	0.0	-0.7			
				63	All Years							0.0	0.0	0.0	0.9			
				65	All Years							0.0	0.0	0.0	-0.8			
Mouth of Clear Creek	68	All Years							0.0	0.0	0.0	0.0						
	70	All Years							0.0	0.0	0.0	0.0						
	75	All Years							0.0	0.0	0.0	0.0						
	60	All Years							0.0	0.0	0.0	0.0						
	63	All Years							0.0	0.0	0.0	0.0						

Table AQ-T-2-9e

River Lamprey in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	February through July	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	50-64	All Years						0.0	0.0	0.3	0.7	1.2	2.4		
			Clear Creek at Igo	50-64	All Years						0.0	0.0	1.6	0.4	0.1	-0.1		
			Mouth of Clear Creek	50-64	All Years						0.0	-0.2	-1.7	0.1	1.2	2.4		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Clear Creek at Igo	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0
			Mouth of Clear Creek	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.2	0.0

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-2-9f

Pacific Lamprey in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	50-64	All Years					0.0	0.0	0.0	0.3	0.7	1.2	2.4	2.7	
			Clear Creek at Igo	50-64	All Years					0.0	0.0	0.0	1.6	0.4	0.1	-0.1	0.5	
			Mouth of Clear Creek	50-64	All Years					0.0	0.0	-0.2	-1.7	0.1	1.2	2.4	-2.4	
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Clear Creek at Igo	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	
			Mouth of Clear Creek	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.2	0.0	

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-2-9g
Hardhead in Clear Creek

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adults and Other Lifestages	Year-round	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Clear Creek at Igo	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0
			Mouth of Clear Creek	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.8	-0.9	0.2
Adult Spawning	April through June	Monthly mean water temperatures (°F)	Below Whiskeytown Dam	59-64	All Years								0.0	0.0	0.0		
			Clear Creek at Igo	59-64	All Years								0.0	0.0	-0.2		
			Mouth of Clear Creek	59-64	All Years							0.0	0.0	2.5			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

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Appendix 12E
Fisheries Water Temperature
Assessment Summary Tables
Sacramento River

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Alternative A Compared to No Action Alternative

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Table AQ-T-3-3a
Winter-run Chinook Salmon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative									
			Description	Value			Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	December through July	Monthly mean water temperatures (°F)	Below Keswick Dam	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Below RBDD	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	-0.7	-1.9		
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Feather River Confluence	60	All Years	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0		
				64	All Years	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	-1.0			
			Freeport	60	All Years	0.0	0.0	0.0	-0.1	0.8	0.0	0.0	0.0	0.0		
				64	All Years	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0		
				68	All Years	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	0.0	0.0		
Spawning, egg incubation, and initial rearing	April through August	Monthly mean water temperatures (°F)	Below Keswick Dam	56	All Years					0.0	0.0	0.0	-2.6	-3.6		
				58	All Years					0.0	0.0	0.0	-0.6	-2.2		
				60	All Years					0.0	0.0	0.0	0.0	-1.6		
				62	All Years					0.0	0.0	0.0	0.0	-1.6		
			Ball's Ferry	56	All Years						0.0	-1.2	-0.5	-2.0	0.0	
				58	All Years						0.0	0.0	-0.3	-3.1	-4.1	
				60	All Years						0.0	0.0	0.0	-0.6	-1.9	
				62	All Years						0.0	0.0	0.0	0.0	-1.5	
			Jelly's Ferry	56	All Years						1.5	-10.3	-0.1	3.3	-2.2	
				58	All Years						0.0	-2.2	-0.3	-0.6	-7.7	
				60	All Years						0.0	0.0	0.0	-0.1	-2.5	
				62	All Years						0.0	0.0	0.0	0.0	-1.5	
Bend Bridge	56	All Years						1.2	1.4	-3.6	1.3	-3.5				
	58	All Years						0.0	-1.6	-1.0	-1.7	-1.6				
	60	All Years						0.0	0.0	0.0	-0.6	-3.9				
	62	All Years						0.0	0.0	0.0	-0.4	-1.5				
Juvenile Rearing and Emigration	July through April	Monthly mean water temperatures (°F)	Below Keswick Dam	60	All Years	0.0	0.0	0.0	0.0	0.0			0.0	-1.6	-0.7	
				63	All Years	0.0	0.0	0.0	0.0	0.0			0.0	-2.2	-3.4	
				65	All Years	0.0	0.0	0.0	0.0	0.0			0.0	-0.4	-3.2	
				68	All Years	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	
			Below RBDD	60	All Years	0.0	0.0	0.0	0.0	0.0				-1.9	-4.5	-4.8
				63	All Years	0.0	0.0	0.0	0.0	0.0				-0.6	-1.4	-2.2
				65	All Years	0.0	0.0	0.0	0.0	0.0				0.0	-2.1	-3.7
				68	All Years	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
			Feather River Confluence	60	All Years	0.0	0.0	0.0	0.0	2.7				0.0	0.0	0.0
				63	All Years	0.0	0.0	0.0	0.0	3.1				0.0	0.0	-0.7
				65	All Years	0.0	0.0	0.0	0.0	2.0				0.0	0.0	2.2
				68	All Years	0.0	0.0	0.0	0.0	0.0				-1.0	0.0	-4.6
				70	All Years	0.0	0.0	0.0	0.0	0.0				-3.9	-6.2	-3.7
			Freeport	60	All Years	0.0	0.0	0.0	0.0	0.0				-0.7	-1.7	0.0
				63	All Years	0.0	0.0	0.0	0.0	-0.1	0.8			0.0	0.0	0.0
				65	All Years	0.0	0.0	0.0	0.0	1.9				0.0	0.0	-0.2
				68	All Years	0.0	0.0	0.0	0.0	-0.4				0.0	0.0	-0.3
				70	All Years	0.0	0.0	0.0	0.0	0.0				0.0	0.0	-6.2
75	All Years	0.0	0.0	0.0	0.0	0.0				-5.3	0.6	-6.9				
75	All Years	0.0	0.0	0.0	0.0	0.0				-0.4	0.0	0.0				

Table AQ-T-3-3d

Late Fall-run Chinook Salmon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative														
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep			
Adult Immigration and Holding	October through April	Monthly mean water temperatures (°F)	Below Keswick Dam	60	All Years	-0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
			Below Red Bluff Diversion Dam	60	All Years	-1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
			Feather River Confluence	60	All Years	-11.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7						
				64	All Years	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9						
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
			Freeport	60	All Years	-2.5	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.8						
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6						
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Spawning, egg incubation, and initial rearing	January through May	Monthly mean water temperatures (°F)	Below Keswick Dam	56	All Years				0.0	0.0	0.0	0.0	0.0							
				58	All Years				0.0	0.0	0.0	0.0	0.0							
				60	All Years				0.0	0.0	0.0	0.0	0.0							
				62	All Years				0.0	0.0	0.0	0.0	0.0							
			Ball's Ferry	56	All Years				0.0	0.0	0.0	0.0	0.0	-1.2						
				58	All Years				0.0	0.0	0.0	0.0	0.0	0.0						
				60	All Years				0.0	0.0	0.0	0.0	0.0	0.0						
			Jelly's Ferry	62	All Years				0.0	0.0	0.0	0.0	0.0	0.0						
				56	All Years				0.0	0.0	0.0	0.0	0.0	1.5	-10.3					
				58	All Years				0.0	0.0	0.0	0.0	0.0	0.0	-2.2					
			Bend Bridge	60	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0					
				62	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0					
56	All Years					0.0	0.0	0.0	0.0	0.0	1.2	1.4								
58	All Years					0.0	0.0	0.0	0.0	0.0	0.0	-1.6								
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Red Bluff Diversion Dam	60	All Years	-1.3	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	-0.7	-1.9	-4.5	-4.8			
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	-1.4	-2.2			
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.1	-3.7			
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
			Feather River Confluence	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				60	All Years	-11.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0		
				63	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	1.3	0.0	0.0	0.0		
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	-1.3	0.0	0.0	2.2		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	-1.0	0.0		
			Freeport	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	-2.5	-3.9	-6.2	-3.7	
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.7	-1.7	0.0	
60	All Years	-2.5		0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.8	0.0	0.0	0.0	0.0	0.0				
63	All Years	-4.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.2	0.0	0.0	0.0	-0.2				
65	All Years	-0.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	0.2	0.0	0.0	0.0	-0.3				
Freeport	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	0.0	0.0	-6.2				
	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	-1.0	-5.3	0.6	-6.9				
	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	0.0	0.0				

Table AQ-T-3-3e
Steelhead in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative																
						Description	Value	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep			
Adult Immigration and Holding	August through March	Monthly mean water temperatures (°F)	Below Keswick Dam	52	All Years	-5.6	-7.9	-0.6	0.0	0.0	0.0						-5.5	-5.7				
				56	All Years	-9.4	0.3	0.0	0.0	0.0	0.0							-3.6	-4.2			
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	0.0			
			Below Red Bluff Diversion Dam	52	All Years	-1.6	-6.8	0.0	0.0	0.0	0.0	0.9						0.0	0.0			
				56	All Years	-6.9	0.0	0.0	0.0	0.0	0.0							0.9	-1.2			
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	0.0			
			Feather River Confluence	52	All Years	0.0	1.2	0.0	0.0	1.9	0.0							0.0	0.0			
				56	All Years	0.0	-0.4	0.0	0.0	0.0	2.5							0.0	0.0			
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0							-6.2	-3.7			
			Freeport	52	All Years	0.0	2.5	0.0	0.0	1.2	1.2							0.0	0.0			
				56	All Years	0.0	0.0	0.0	0.0	0.0	1.2							0.0	0.0			
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.6	-6.9			
Spawning and egg incubation	December through April	Monthly mean water temperatures (°F)	Below Keswick Dam	52	All Years		-0.6	0.0	0.0	0.0	1.5											
				54	All Years			0.0	0.0	0.0	0.0											
				57	All Years			0.0	0.0	0.0	0.0											
				60	All Years			0.0	0.0	0.0	0.0											
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Keswick Dam	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-3.2				
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
			Ball's Ferry	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.7	-0.9			
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
			Jelly's Ferry	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.2	-1.6			
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
			Bend Bridge	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
			Below Red Bluff Diversion Dam	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.1	-3.7			
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
			Smolt Emigration	October through May	Monthly mean water temperatures (°F)	Below Red Bluff Diversion Dam	52	All Years	-1.6	-6.8	0.0	0.0	0.0	0.9	4.7	0.0						
							55	All Years	-12.8	0.0	0.0	0.0	0.0	0.0	6.2	7.1						
							59	All Years	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.7					
Feather River Confluence	52	All Years				0.0	1.2	0.0	0.0	1.9	0.0	0.0	0.0	0.0								
	55	All Years				0.0	0.6	0.0	0.0	0.0	5.0	0.0	0.0	0.0								
	59	All Years				0.3	0.0	0.0	0.0	0.0	0.0	0.7	0.0									
Freeport	52	All Years				0.0	2.5	0.0	0.0	1.2	1.2	0.0	0.0									
	55	All Years				0.0	-3.1	0.0	0.0	0.0	2.5	0.0	0.0									
	59	All Years				0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.0								

Table AQ-T-3-3f
Green Sturgeon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative													
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	February through December	Monthly mean water temperatures (°F)	Below Keswick Dam	61	All Years	-1.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.5	-1.2	
				66	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.2
			Below Delevan Intake	61	All Years	-0.2	0.0	0.0		0.0	0.0	2.8	1.3	-0.5	0.0	0.0	0.0	2.8	
				66	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	-2.0	-6.1	-2.7	-3.2		
			Freeport	61	All Years	-0.7	0.0	0.0		0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0		
				66	All Years	-0.1	0.0	0.0		0.0	0.0	1.3	-0.2	0.0	0.0	0.0			
Spawning and Egg Incubation	March through September	Monthly mean water temperatures (°F)	Below Keswick Dam	64	All Years						0.0	0.0	0.0	0.0	0.0	0.0	-2.0	-3.8	
				68	All Years						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Below Red Bluff Diversion Dam	64	All Years						0.0	0.0	0.0	0.0	0.0	0.0	-1.5	-4.1	
				68	All Years						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Wilkins Slough	64	All Years						0.0	0.0	4.0	-2.9	-1.9	0.0	2.3		
				68	All Years						0.0	0.0	0.0	-3.3	-10.4	-3.2	-1.4		
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below RBDD	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.2	-0.8		
			Below Delevan Intake	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.0	-6.1	-2.7	-3.2			
			Freeport	66	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-0.2	0.0	0.0	-1.2		

Table AQ-T-3-3g
White Sturgeon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	November through May	Monthly mean water temperatures (°F)	Hamilton City	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
			Below the Delevan Intake	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
			Freeport	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Spawning and Egg Incubation	February through May	Monthly mean water temperatures (°F)	Hamilton City	61	All Years						0.0	0.0	0.0	-0.5			
				68	All Years						0.0	0.0	0.0	0.0			
			Below the Delevan Intake	61	All Years						0.0	0.0	2.8	1.3			
				68	All Years						0.0	0.0	0.0	0.0			
			Below the Feather River Confluence	61	All Years						0.0	0.0	1.9	0.0			
		68	All Years						0.0	0.0	0.0	0.0					
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Delevan Intake	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.0	-6.1	-2.7	-3.2
			Knights Landing	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.9	-3.7	-0.6	0.0	0.2
			Freeport	66	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-0.2	0.0	0.0	-1.2

Table AQ-T-3-3h
Pacific Lamprey in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative													
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Below Keswick Dam	50-64	All Years					0.0	0.0	0.0	6.4	1.6	1.8	0.8	2.0		
			Below Red Bluff Diversion Dam	50-64	All Years					0.0	0.0	2.3	-0.2	0.0	0.0	0.0	0.0	1.5	
			Below the Delevan Intake	50-64	All Years					0.0	-0.2	0.7	0.0	0.8	11.5	2.7	-5.6		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Keswick Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Below the Delevan Intake	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Freeport	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-5.7	-3.8	0.1	

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-3i
River Lamprey in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	February through July	Monthly mean water temperatures (°F)	Below Keswick Dam	50-64	All Years						0.0	0.0	6.4	1.6	1.8	0.8		
			Below Red Bluff Diversion Dam	50-64	All Years						0.0	2.3	-0.2	0.0	0.0	0.0		
			Below the Delevan Intake	50-64	All Years						-0.2	0.7	0.0	0.8	11.5	2.7		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Keswick Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Delevan Intake	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Freeport	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-5.7	-3.8	0.1

*Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-3j
Hardhead in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative													
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adults and Other Lifestages	Year-round	Monthly mean water temperatures (°F)	Below Keswick Dam	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-3.2
			Below the Delevan Intake	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	-8.9	-12.1	-1.8	-5.9		
			Freeport	65-82	All Years	-0.2	0.0	0.0	0.0	0.0	0.0	-0.4	0.2	0.0	0.0	0.0	0.0	-0.3	
Adult Spawning	April through June	Monthly mean water temperatures (°F)	Below Keswick Dam	59-64	All Years								0.0	0.0	0.0				
			Below the Delevan Intake	59-64	All Years								6.9	1.8	11.5				
			Freeport	59-64	All Years								-1.5	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-31
Splittail in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Spawning	February through May	Monthly mean water temperatures (°F)	Below the Delevan Intake	45-75	All Years						0.1	0.0	0.0	0.0				
			Freeport	45-75	All Years						0.0	0.0	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-3m

Striped Bass in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	Below the Delevan Intake	59-68	All Years								6.9	1.0	0.0			
			Below the Feather River Confluence	59-68	All Years									0.7	0.0	0.6		
Larvae, Fry, and Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Delevan Intake	61-71	All Years	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	2.8	1.3	-0.5	0.0	1.7	2.8
			Below the Feather River Confluence	61-71	All Years	-11.3	0.0	0.0	0.0	0.0	0.0	0.0	1.9	-1.3	3.7	15.0	2.5	0.2

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-3n
American Shad in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative													
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	Below Red Bluff Diversion Dam	60-70	All Years								0.0	-1.6	-0.7				
			Below the Feather River Confluence	60-70	All Years									2.7	0.6	2.5			
			Freeport	60-70	All Years									0.8	-0.8	1.0			
Larvae, Fry, and Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Delevan Intake	63-77	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	-5.9	-6.1	-1.2	3.2		
			Below the Feather River Confluence	63-77	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	3.1	1.3	0.0	0.0	0.0	-0.7		
			Freeport	63-77	All Years	-4.2	0.0	0.0	0.0	0.0	0.0	1.9	1.2	0.0	0.6	0.0	-0.2		

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-3o
Largemouth Bass in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative													
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Spawning	March through June	Monthly mean water temperatures (°F)	Below Keswick Dam	59-75	All Years							0.0	0.0	0.0	0.0				
			Below the Delevan Intake	59-75	All Years							0.0	6.9	1.0	0.0				
			Freeport	59-75	All Years							-0.1	0.1	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-3p
Delta Smelt in the Delta

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult	December through May	Monthly mean water temperatures (°F)	Sacramento River at Freeport	59-68	All Years				0.0	0.0	0.0	-0.1	0.1	0.5				
Spawning and Egg Incubation	February through May	Monthly mean water temperatures (°F)	Sacramento River at Freeport	59-68	All Years					0.0	-0.1	0.1	0.5					
Larval	March through June	Monthly mean water temperatures (°F)	Sacramento River at Freeport	59-68	All Years						-0.1	0.1	0.5	0.0				
Juvenile	May through July	Monthly mean water temperatures (°F)	Sacramento River at Freeport	59-68	All Years								0.5	0.0	0.0			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

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Alternative B Compared to No Action Alternative

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Table AQ-T-3-5a
Winter-run Chinook Salmon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative											
			Description	Value			Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	December through July	Monthly mean water temperatures (°F)	Below Keswick Dam	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
			Below RBDD	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	-0.4	-1.4				
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
			Feather River Confluence	60	All Years	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0				
				64	All Years	0.0	0.0	0.0	0.0	0.0	3.1	0.6	0.0	0.0				
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-0.6	-1.6				
			Freeport	60	All Years	0.0	0.0	0.0	-0.1	1.3	0.0	0.0	0.0	0.0				
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.6	1.2	0.0	0.0				
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0				
Spawning, egg incubation, and initial rearing	April through August	Monthly mean water temperatures (°F)	Below Keswick Dam	56	All Years					0.0	0.5	0.0	-2.8	-1.4				
				58	All Years					0.0	0.0	0.0	-0.9	-1.9				
				60	All Years					0.0	0.0	0.0	0.0	-2.2				
				62	All Years					0.0	0.0	0.0	0.0	-2.5				
			Ball's Ferry	56	All Years					0.0	-0.3	0.5	-1.9	-0.2				
				58	All Years					0.0	0.0	-0.3	-3.0	-2.5				
				60	All Years					0.0	0.0	0.0	-0.6	-2.1				
				62	All Years					0.0	0.0	0.0	0.0	-2.4				
			Jelly's Ferry	56	All Years					0.9	-6.0	0.8	0.9	-7.7				
				58	All Years					0.0	-1.0	-0.2	-0.5	-5.1				
				60	All Years					0.0	0.0	0.0	0.1	-2.0				
				62	All Years					0.0	0.0	0.0	0.0	-2.4				
Bend Bridge	56	All Years					0.9	4.0	-4.4	-3.2	-2.6							
	58	All Years					0.0	-1.3	0.3	-1.0	-0.3							
	60	All Years					0.0	0.0	0.0	-1.1	-3.3							
	62	All Years					0.0	0.0	0.0	-0.4	-2.4							
Juvenile Rearing and Emigration	July through April	Monthly mean water temperatures (°F)	Below Keswick Dam	60	All Years	0.0	0.0	0.0	0.0	0.0			0.0	-2.2	-1.1			
				63	All Years	0.0	0.0	0.0	0.0	0.0			0.0	-2.2	-0.6			
				65	All Years	0.0	0.0	0.0	0.0	0.0			0.0	-0.4	-3.0			
				68	All Years	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0			
				75	All Years	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0			
			Below RBDD	60	All Years	0.0	0.0	0.0	0.0	0.0				-1.4	-3.6	-4.7		
				63	All Years	0.0	0.0	0.0	0.0	0.0				-0.6	-2.4	-1.2		
				65	All Years	0.0	0.0	0.0	0.0	0.0				0.0	-2.6	-3.6		
				68	All Years	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0		
				70	All Years	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0		
			Feather River Confluence	60	All Years	0.0	0.0	0.0	0.0	0.0	2.5				0.0	0.0	0.0	
				63	All Years	0.0	0.0	0.0	0.0	0.0	4.4				0.0	0.0	-0.7	
				65	All Years	0.0	0.0	0.0	0.0	0.0	2.2				0.0	0.0	1.1	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0				-1.6	0.0	-4.6	
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0				-4.6	-2.5	-5.4	
			Freeport	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0				0.6	-1.7	0.0	
				63	All Years	0.0	0.0	0.0	0.0	0.0	2.5				0.0	0.0	0.0	
				65	All Years	0.0	0.0	0.0	0.0	0.0	-0.1				0.0	0.0	-1.3	
68	All Years	0.0		0.0	0.0	0.0	0.0	0.0				0.0	0.0	-5.0				
70	All Years	0.0		0.0	0.0	0.0	0.0	0.0				-4.1	1.8	-6.9				
75	All Years	0.0	0.0	0.0	0.0	0.0	0.0				-0.3	0.0	0.0					

Table AQ-T-3-5b
Spring-run Chinook Salmon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative															
						Description	Value	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	February through September	Monthly mean water temperatures (°F)	Below Keswick Dam	60	All Years						0.0	0.0	0.0	0.0	0.0	0.0	-2.2	-1.1			
				64	All Years						0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	-4.0		
				68	All Years						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Below RBDD	60	All Years							0.0	0.0	0.0	-1.6	-0.4	-1.4	-3.6	-4.7		
				64	All Years							0.0	0.0	0.0	0.0	0.0	0.0	-2.5	-2.4		
				68	All Years							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Feather River Confluence	60	All Years							0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	
				64	All Years							0.0	0.0	3.1	0.6	0.0	0.0	0.0	0.0	-1.3	
				68	All Years							0.0	0.0	0.0	1.3	-0.6	-1.6	0.0	-4.6		
			Freeport	60	All Years							0.0	-0.1	1.3	0.0	0.0	0.0	0.0	0.0	0.0	
				64	All Years							0.0	0.0	0.6	1.2	0.0	0.0	0.0	0.0	-1.9	
				68	All Years							0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	-5.0	
Spawning, egg incubation, and initial rearing	September through April	Monthly mean water temperatures (°F)	Below Keswick Dam	56	All Years	-7.2	0.1	0.0	0.0	0.0	0.0	0.0						-4.4			
				58	All Years	-2.0	0.0	0.0	0.0	0.0	0.0	0.0							-0.2		
				60	All Years	-0.5	0.0	0.0	0.0	0.0	0.0	0.0							-1.1		
			Ball's Ferry	62	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0								-1.5	
				56	All Years	-5.9	0.0	0.0	0.0	0.0	0.0	0.0								-11.0	
				58	All Years	-3.2	0.0	0.0	0.0	0.0	0.0	0.0								-4.9	
			Jelly's Ferry	60	All Years	-1.3	0.0	0.0	0.0	0.0	0.0	0.0								-2.1	
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0								-1.1	
				56	All Years	-7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.9							-1.9	
			Bend Bridge	58	All Years	-4.2	0.0	0.0	0.0	0.0	0.0	0.0								-5.9	
				60	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	0.0								-1.3	
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0								-1.0	
			Red Bluff Diversion Dam	56	All Years	-6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.9							-2.2	
				58	All Years	-4.5	0.0	0.0	0.0	0.0	0.0	0.0								-7.7	
				60	All Years	-1.5	0.0	0.0	0.0	0.0	0.0	0.0								-3.7	
			Red Bluff Diversion Dam	62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0								-1.3	
				56	All Years	-6.5	0.0	0.0	0.0	0.0	0.0	0.0	4.5							-1.3	
				58	All Years	-3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.3							-3.6	
60	All Years	-1.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0							-4.7				
62	All Years	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0							-1.1				
60	All Years	-0.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.2	-1.1				
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Keswick Dam	63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.2	-0.6		
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-3.0		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Below RBDD	60	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	-0.4	-1.4	-3.6	-4.7		
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	-2.4	-1.2		
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.6	-3.6		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Smolt Emigration	October through June	Monthly mean water temperatures (°F)	Below Red Bluff Diversion Dam	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
							60	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	-0.4			
63	All Years	0.0					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
65	All Years	0.0					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
68	All Years	0.0					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Feather River Confluence	60	All Years				-10.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0						
	63	All Years				0.9	0.0	0.0	0.0	0.0	0.0	0.0	4.4	2.1	0.0						
	65	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0						
	68	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-0.6						
	70	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.0						
Freeport	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0									
	60	All Years	-3.7	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	1.3	0.0	0.0								
	63	All Years	-4.4	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.2	0.0									
	65	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.2	0.0									
	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0									
70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	-2.9										
75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0										

Table AQ-T-3-5c
Fall-run Chinook Salmon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative														
						Description	Value	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Immigration and Holding	July through December	Monthly mean water temperatures (°F)	Below Keswick Dam	60	All Years	-0.5	0.0	0.0								0.0	-2.2	-1.1		
				64	All Years	0.0	0.0	0.0									0.0	-1.6	-4.0	
				68	All Years	0.0	0.0	0.0									0.0	0.0	0.0	
			Below Red Bluff Diversion Dam	60	All Years	-1.2	0.0	0.0										-1.4	-3.6	-4.7
				64	All Years	0.0	0.0	0.0										0.0	-2.5	-2.4
				68	All Years	0.0	0.0	0.0										0.0	0.0	0.0
			Feather River Confluence	60	All Years	-10.0	0.0	0.0										0.0	0.0	0.0
				64	All Years	-0.9	0.0	0.0										0.0	0.0	-1.3
				68	All Years	0.0	0.0	0.0										-1.6	0.0	-4.6
			Freeport	60	All Years	-3.7	0.0	0.0										0.0	0.0	0.0
				64	All Years	1.0	0.0	0.0										0.0	0.0	-1.9
				68	All Years	0.0	0.0	0.0										0.0	0.0	-5.0
Spawning, egg incubation, and initial rearing	October through March	Monthly mean water temperatures (°F)	Below Keswick Dam	56	All Years	-7.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0							
				58	All Years	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				60	All Years	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
			Ball's Ferry	62	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				56	All Years	-5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				58	All Years	-3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
			Jelly's Ferry	60	All Years	-1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				56	All Years	-7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.9							
			Bend Bridge	58	All Years	-4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				60	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
			Below Red Bluff Diversion Dam	56	All Years	-6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9						
				58	All Years	-4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				60	All Years	-1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
			Below Red Bluff Diversion Dam	62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				56	All Years	-6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5						
				58	All Years	-3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3						
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Red Bluff Diversion Dam	60	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	-0.4	-1.4	-3.6	-4.7			
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	-2.4	-1.2			
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.6	-3.6			
			Feather River Confluence	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Freeport	60	All Years	-10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0		
				63	All Years	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	2.1	0.0	0.0	0.0		
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0		
			Freeport	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-0.6	-1.6	0.0		
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	-4.6	-2.5		
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	-1.7	0.0		
			Freeport	60	All Years	-3.7	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	1.3	0.0	0.0	0.0	0.0		
				63	All Years	-4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.2	0.0	0.0	0.0		
				65	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.2	0.0	0.0	0.0		
			Freeport	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0		
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	-2.9	-4.1	1.8		
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	0.0		

Table AQ-T-3-5d

Late Fall-run Chinook Salmon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative														
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep			
Adult Immigration and Holding	October through April	Monthly mean water temperatures (°F)	Below Keswick Dam	60	All Years	-0.5	0.0	0.0	0.0	0.0	0.0	0.0								
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
			Below Red Bluff Diversion Dam	60	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	0.0								
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
			Feather River Confluence	60	All Years	-10.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5							
				64	All Years	-0.9	0.0	0.0	0.0	0.0	0.0	0.0	3.1							
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
			Freeport	60	All Years	-3.7	0.0	0.0	0.0	0.0	0.0	-0.1	1.3							
				64	All Years	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6							
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Spawning, egg incubation, and initial rearing	January through May	Monthly mean water temperatures (°F)	Below Keswick Dam	56	All Years				0.0	0.0	0.0	0.0	0.5							
				58	All Years				0.0	0.0	0.0	0.0	0.0							
				60	All Years				0.0	0.0	0.0	0.0	0.0							
				62	All Years				0.0	0.0	0.0	0.0	0.0							
			Ball's Ferry	56	All Years				0.0	0.0	0.0	0.0	0.0	-0.3						
				58	All Years				0.0	0.0	0.0	0.0	0.0	0.0						
				60	All Years				0.0	0.0	0.0	0.0	0.0	0.0						
			Jelly's Ferry	62	All Years				0.0	0.0	0.0	0.0	0.0	0.0						
				56	All Years				0.0	0.0	0.0	0.0	0.9	-6.0						
				58	All Years				0.0	0.0	0.0	0.0	0.0	-1.0						
			Bend Bridge	60	All Years				0.0	0.0	0.0	0.0	0.0	0.0						
				62	All Years				0.0	0.0	0.0	0.0	0.0	0.0						
56	All Years					0.0	0.0	0.0	0.0	0.9	4.0									
58	All Years					0.0	0.0	0.0	0.0	0.0	-1.3									
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Red Bluff Diversion Dam	60	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	-0.4	-1.4	-3.6	-4.7			
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	-2.4	-1.2			
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.6	-3.6			
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
			Feather River Confluence	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				60	All Years	-10.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0		
				63	All Years	0.9	0.0	0.0	0.0	0.0	0.0	0.0	4.4	2.1	0.0	0.0	0.0	0.0		
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	1.1		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-0.6	-1.6	0.0	-4.6		
			Freeport	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	-4.6	-2.5	-5.4		
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	-1.7	0.0		
				60	All Years	-3.7	0.0	0.0	0.0	0.0	0.0	-0.1	1.3	0.0	0.0	0.0	0.0	0.0		
				63	All Years	-4.4	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.2	0.0	0.0	0.0	0.0		
				65	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.2	0.0	0.0	0.0	-1.3		
	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	-5.0					
	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	-2.9	-4.1	1.8	-6.9					
	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	0.0	0.0					

Table AQ-T-3-5e
Steelhead in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative															
						Description	Value	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	August through March	Monthly mean water temperatures (°F)	Below Keswick Dam	52	All Years	-3.2	-7.7	-0.6	0.0	0.0	0.0							-11.1	-4.0		
				56	All Years	-7.2	0.1	0.0	0.0	0.0	0.0									-1.4	-4.4
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0									0.0	0.0
			Below Red Bluff Diversion Dam	52	All Years	0.0	-7.1	0.0	0.0	0.0	0.0	2.2								0.0	0.0
				56	All Years	-6.5	0.0	0.0	0.0	0.0	0.0	0.0								0.9	-1.3
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0								0.0	0.0
			Feather River Confluence	52	All Years	0.0	2.5	0.0	0.0	1.4	1.2									0.0	0.0
				56	All Years	0.0	-0.4	0.0	0.0	0.0	2.5									0.0	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0									-2.5	-5.4
			Freeport	52	All Years	0.0	0.6	0.0	0.0	-0.4	1.2									0.0	0.0
				56	All Years	0.0	-0.2	0.0	0.0	0.0	1.2									0.0	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0									1.8	-6.9
Spawning and egg incubation	December through April	Monthly mean water temperatures (°F)	Below Keswick Dam	52	All Years			-0.6	0.0	0.0	0.0	2.1									
				54	All Years			0.0	0.0	0.0	0.0	0.0									
				57	All Years			0.0	0.0	0.0	0.0	0.0									
				60	All Years			0.0	0.0	0.0	0.0	0.0									
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Keswick Dam	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-3.0		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Ball's Ferry	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.4	-0.6
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Jelly's Ferry	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.9	-1.3
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Bend Bridge	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below Red Bluff Diversion Dam	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.6	-3.6
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Smolt Emigration	October through May	Monthly mean water temperatures (°F)	Below Red Bluff Diversion Dam	52	All Years	0.0	-7.1	0.0	0.0	0.0	2.2	4.5	0.0								
				55	All Years	-12.1	0.0	0.0	0.0	0.0	0.0	7.4	7.6								
				59	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5							
			Feather River Confluence	52	All Years	0.0	2.5	0.0	0.0	1.4	1.2	0.0	0.0								
				55	All Years	0.0	0.6	0.0	0.0	0.0	5.0	0.0	0.0								
				59	All Years	0.3	0.0	0.0	0.0	0.0	0.0	0.9	0.0								
			Freeport	52	All Years	0.0	0.6	0.0	0.0	-0.4	1.2	0.0	0.0								
				55	All Years	0.0	-2.5	0.0	0.0	0.0	2.5	0.0	0.0								
				59	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	0.3	0.0								

Table AQ-T-3-5f
Green Sturgeon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative													
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	February through December	Monthly mean water temperatures (°F)	Below Keswick Dam	61	All Years	-2.3	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.4	-1.3	
				66	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.7
			Below Delevan Intake	61	All Years	-0.3	0.0	0.0		0.0	0.0	2.8	1.9	-0.4	0.0	0.0	0.0	0.0	2.2
				66	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	-0.1	-3.3	3.1	-4.9		
			Freeport	61	All Years	0.6	0.0	0.0		0.0	0.0	2.5	0.1	0.0	0.0	0.0	0.0	0.0	
				66	All Years	0.0	0.0	0.0		0.0	0.0	2.5	-0.2	0.0	0.0	0.0	0.0		
Spawning and Egg Incubation	March through September	Monthly mean water temperatures (°F)	Below Keswick Dam	64	All Years						0.0	0.0	0.0	0.0	0.0	0.0	-1.6	-4.0	
				68	All Years						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Below Red Bluff Diversion Dam	64	All Years						0.0	0.0	0.0	0.0	0.0	0.0	-2.5	-2.4	
				68	All Years						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Wilkins Slough	64	All Years						0.0	0.0	7.5	0.6	-1.1	0.0	0.0	-0.1	
				68	All Years						0.0	0.0	0.0	-3.1	-4.0	0.6	-1.7		
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below RBDD	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.1	-0.5		
			Below Delevan Intake	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-3.3	3.1	-4.9		
			Freeport	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	-0.2	0.0	0.0	-1.2		

Table AQ-T-3-5g
White Sturgeon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative													
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	November through May	Monthly mean water temperatures (°F)	Hamilton City	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0						
			Below the Delevan Intake	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0						
			Freeport	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Spawning and Egg Incubation	February through May	Monthly mean water temperatures (°F)	Hamilton City	61	All Years						0.0	0.0	0.0	3.2					
				68	All Years						0.0	0.0	0.0	0.0					
			Below the Delevan Intake	61	All Years						0.0	0.0	2.8	1.9					
				68	All Years							0.0	0.0	0.0	0.0				
			Below the Feather River Confluence	61	All Years							0.0	0.0	3.1	0.1				
		68	All Years							0.0	0.0	1.3							
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Delevan Intake	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-3.3	3.1	-4.9		
			Knights Landing	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	-1.7	-0.5	-0.4	-1.9	
			Freeport	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	-0.2	0.0	0.0	-1.2	

Table AQ-T-3-5h
Pacific Lamprey in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Below Keswick Dam	50-64	All Years				0.0	0.0	0.9	8.1	1.5	-0.1	0.0	1.6	
			Below Red Bluff Diversion Dam	50-64	All Years				0.0	0.0	3.6	-0.2	0.0	0.0	0.0	2.5	
			Below the Delevan Intake	50-64	All Years				0.0	-0.2	1.8	0.1	-2.2	1.6	1.9	-4.7	
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Keswick Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Delevan Intake	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Freeport	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3	-1.9	-3.8	-0.1

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-5i
River Lamprey in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	February through July	Monthly mean water temperatures (°F)	Below Keswick Dam	50-64	All Years						0.0	0.9	8.1	1.5	-0.1	0.0		
			Below Red Bluff Diversion Dam	50-64	All Years						0.0	3.6	-0.2	0.0	0.0	0.0		
			Below the Delevan Intake	50-64	All Years						-0.2	1.8	0.1	-2.2	1.6	1.9		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Keswick Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Delevan Intake	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Freeport	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3	-1.9	-3.8	-0.1

*Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-5j
Hardhead in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative													
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adults and Other Lifestages	Year-round	Monthly mean water temperatures (°F)	Below Keswick Dam	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-3.0	
			Below the Delevan Intake	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	-7.9	-3.3	3.2	-3.2		
			Freeport	65-82	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.2	0.0	0.0	0.0	0.0	-1.3
Adult Spawning	April through June	Monthly mean water temperatures (°F)	Below Keswick Dam	59-64	All Years								0.0	0.0	0.0				
			Below the Delevan Intake	59-64	All Years								7.4	0.5	1.6				
			Freeport	59-64	All Years								-0.3	-1.2	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-5I

Splittail in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Spawning	February through May	Monthly mean water temperatures (°F)	Below the Delevan Intake	45-75	All Years						0.3	0.0	0.0	0.0				
			Freeport	45-75	All Years						0.0	0.0	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-5m
Striped Bass in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	Below the Delevan Intake	59-68	All Years								7.4	2.7	0.0			
			Below the Feather River Confluence	59-68	All Years									0.9	-1.3	0.6		
Larvae, Fry, and Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Delevan Intake	61-71	All Years	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	2.8	1.9	-0.4	0.0	1.7	2.2
			Below the Feather River Confluence	61-71	All Years	-8.8	0.0	0.0	0.0	0.0	0.0	0.0	3.1	-0.9	3.7	10.0	0.0	1.4

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-5n
American Shad in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	Below Red Bluff Diversion Dam	60-70	All Years							0.0	-1.6	-0.4			
			Below the Feather River Confluence	60-70	All Years							2.5	0.5	0.0			
			Freeport	60-70	All Years							1.3	-1.9	2.9			
Larvae, Fry, and Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Delevan Intake	63-77	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5	6.0	-2.4	-0.1	1.7
			Below the Feather River Confluence	63-77	All Years	0.9	0.0	0.0	0.0	0.0	0.0	4.4	2.1	0.0	-0.4	0.0	-0.7
			Freeport	63-77	All Years	-4.4	0.0	0.0	0.0	0.0	0.0	2.5	1.2	0.0	0.0	0.0	0.0

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-5o
Largemouth Bass in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative													
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Spawning	March through June	Monthly mean water temperatures (°F)	Below Keswick Dam	59-75	All Years							0.0	0.0	0.0	0.0				
			Below the Delevan Intake	59-75	All Years							0.0	7.4	2.7	0.0				
			Freeport	59-75	All Years							0.0	0.3	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-5p
Delta Smelt in the Delta

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult	December through May	Monthly mean water temperatures (°F)	Sacramento River at Freeport	59-68	All Years				0.0	0.0	0.0	0.0	0.3	-2.0				
Spawning and Egg Incubation	February through May	Monthly mean water temperatures (°F)	Sacramento River at Freeport	59-68	All Years					0.0	0.0	0.3	-2.0					
Larval	March through June	Monthly mean water temperatures (°F)	Sacramento River at Freeport	59-68	All Years						0.0	0.3	-2.0	0.0				
Juvenile	May through July	Monthly mean water temperatures (°F)	Sacramento River at Freeport	59-68	All Years								-2.0	0.0	0.0			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

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Alternative C Compared to No Action Alternative

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Table AQ-T-3-7a
Winter-run Chinook Salmon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative										
			Description	Value			Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Immigration and Holding	December through July	Monthly mean water temperatures (°F)	Below Keswick Dam	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
			Below RBDD	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	-0.7	-1.9			
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
			Feather River Confluence	60	All Years	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0			
				64	All Years	0.0	0.0	0.0	0.0	0.0	1.9	0.6	0.0	0.0			
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-0.6	-2.0			
			Freeport	60	All Years	0.0	0.0	0.0	-0.1	0.8	0.0	0.0	0.0	0.0			
				64	All Years	0.0	0.0	0.0	0.0	0.8	1.2	0.0	0.0	0.0			
				68	All Years	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	0.0	0.0			
Spawning, egg incubation, and initial rearing	April through August	Monthly mean water temperatures (°F)	Below Keswick Dam	56	All Years					0.0	0.0	0.0	-3.9	-3.7			
				58	All Years					0.0	0.0	0.0	-0.4	-2.5			
				60	All Years					0.0	0.0	0.0	0.0	-3.3			
				62	All Years					0.0	0.0	0.0	0.0	-3.4			
			Ball's Ferry	56	All Years						0.0	-1.8	0.5	-2.9	-0.7		
				58	All Years						0.0	0.0	-0.3	-3.9	-4.6		
				60	All Years						0.0	0.0	0.0	-0.2	-2.5		
				62	All Years						0.0	0.0	0.0	0.0	-3.3		
			Jelly's Ferry	56	All Years						1.4	-6.3	0.7	2.3	-6.8		
				58	All Years						0.0	-1.1	-0.3	-1.2	-5.9		
				60	All Years						0.0	0.0	0.0	0.0	-3.0		
				62	All Years						0.0	0.0	0.0	0.0	-3.4		
Bend Bridge	56	All Years						1.1	4.0	-2.0	-1.2	-4.4					
	58	All Years						0.0	-2.2	-1.3	-2.7	-1.2					
	60	All Years						0.0	0.0	0.0	-0.7	-4.6					
	62	All Years						0.0	0.0	0.0	-0.4	-3.5					
Juvenile Rearing and Emigration	July through April	Monthly mean water temperatures (°F)	Below Keswick Dam	60	All Years	0.0	0.0	0.0	0.0	0.0			0.0	-3.3	-1.7		
				63	All Years	0.0	0.0	0.0	0.0	0.0				0.0	-2.9	-1.7	
				65	All Years	0.0	0.0	0.0	0.0	0.0				0.0	-0.4	-2.5	
				68	All Years	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0	
			Below RBDD	60	All Years	0.0	0.0	0.0	0.0	0.0				-1.9	-5.0	-4.7	
				63	All Years	0.0	0.0	0.0	0.0	0.0				-0.6	-3.6	-3.3	
				65	All Years	0.0	0.0	0.0	0.0	0.0				0.0	-3.2	-2.7	
				68	All Years	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0	
				70	All Years	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0	
			Feather River Confluence	60	All Years	0.0	0.0	0.0	0.0	0.0	2.7				0.0	0.0	0.0
				63	All Years	0.0	0.0	0.0	0.0	0.0	3.1				0.0	0.0	-0.7
				65	All Years	0.0	0.0	0.0	0.0	0.0	2.0				0.0	0.0	1.2
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0				-2.0	0.0	-3.4
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0				-3.3	-8.7	-5.0
			Freeport	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0				-0.7	-3.0	0.0
				63	All Years	0.0	0.0	0.0	0.0	0.0	-0.1	0.8			0.0	0.0	0.0
				65	All Years	0.0	0.0	0.0	0.0	0.0	1.3				0.0	0.0	-0.2
68	All Years	0.0		0.0	0.0	0.0	0.0	0.0				0.0	0.0	-1.4			
70	All Years	0.0		0.0	0.0	0.0	0.0	0.0				-5.3	0.0	-8.9			
75	All Years	0.0	0.0	0.0	0.0	0.0	0.0				-0.4	0.0	0.0				

Table AQ-T-3-7b
Spring-run Chinook Salmon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative														
						Description	Value	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Immigration and Holding	February through September	Monthly mean water temperatures (°F)	Below Keswick Dam	60	All Years						0.0	0.0	0.0	0.0	0.0	0.0	-3.3	-1.7		
				64	All Years						0.0	0.0	0.0	0.0	0.0	0.0	-2.0	-1.4		
				68	All Years						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Below RBDD	60	All Years							0.0	0.0	0.0	-1.6	-0.7	-1.9	-5.0	-4.7	
				64	All Years							0.0	0.0	0.0	0.0	0.0	0.0	-3.4	-3.3	
				68	All Years							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Feather River Confluence	60	All Years							0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0
				64	All Years							0.0	0.0	1.9	0.6	0.0	0.0	0.0	0.0	-1.4
				68	All Years							0.0	0.0	0.0	1.3	-0.6	-2.0	0.0	-3.4	
			Freeport	60	All Years							0.0	-0.1	0.8	0.0	0.0	0.0	0.0	0.0	0.0
				64	All Years							0.0	0.0	0.8	1.2	0.0	0.0	0.0	0.0	-1.8
				68	All Years							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-7.5
Spawning, egg incubation, and initial rearing	September through April	Monthly mean water temperatures (°F)	Below Keswick Dam	56	All Years	-7.4	0.4	0.0	0.0	0.0	0.0	0.0						-4.3		
				58	All Years	-3.3	0.0	0.0	0.0	0.0	0.0	0.0							-2.2	
				60	All Years	-1.3	0.0	0.0	0.0	0.0	0.0	0.0							-1.7	
			Ball's Ferry	62	All Years	0.1	0.0	0.0	0.0	0.0	0.0	0.0								-3.0
				56	All Years	-4.2	0.0	0.0	0.0	0.0	0.0	0.0								-13.2
				58	All Years	-3.1	0.0	0.0	0.0	0.0	0.0	0.0								-5.4
			Jelly's Ferry	60	All Years	-2.4	0.0	0.0	0.0	0.0	0.0	0.0								-2.7
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0								-2.7
				56	All Years	-6.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4							-0.2
			Bend Bridge	58	All Years	-3.5	0.0	0.0	0.0	0.0	0.0	0.0								-4.9
				60	All Years	-2.3	0.0	0.0	0.0	0.0	0.0	0.0								-1.6
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0								-2.7
			Red Bluff Diversion Dam	56	All Years	-6.7	0.0	0.0	0.0	0.0	0.0	0.0	1.1							0.9
				58	All Years	-3.9	0.0	0.0	0.0	0.0	0.0	0.0								-9.3
				60	All Years	-2.2	0.0	0.0	0.0	0.0	0.0	0.0								-4.4
			Red Bluff Diversion Dam	62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0								-3.2
				56	All Years	-5.2	0.0	0.0	0.0	0.0	0.0	0.0	4.7							-3.3
				58	All Years	-3.5	0.0	0.0	0.0	0.0	0.0	0.0								-4.1
60	All Years	-2.0		0.0	0.0	0.0	0.0	0.0	0.0								-4.7			
62	All Years	0.0		0.0	0.0	0.0	0.0	0.0	0.0								-2.1			
60	All Years	-1.3		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.3	-1.7			
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Keswick Dam	63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.9	-1.7	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-2.5	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				60	All Years	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	-0.7	-1.9	-5.0	-4.7	
			Below RBDD	63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	-3.6	-3.3
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.2	-2.7	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				60	All Years	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Smolt Emigration	October through June	Monthly mean water temperatures (°F)	Below Red Bluff Diversion Dam	60	All Years	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	-0.7						
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
			Feather River Confluence	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
				60	All Years	-10.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0					
				63	All Years	0.5	0.0	0.0	0.0	0.0	0.0	0.0	3.1	1.3	0.0					
				65	All Years	0.5	0.0	0.0	0.0	0.0	0.0	0.0	2.0	-1.3	0.0					
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-0.6					
			Freeport	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.0					
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
				60	All Years	-2.5	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.8	0.0	0.0				
				63	All Years	-4.4	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.6	0.0					
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	0.2	0.0					
Freeport	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.0								
	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	-2.3								
	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								

Table AQ-T-3-7c
Fall-run Chinook Salmon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative														
						Description	Value	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Immigration and Holding	July through December	Monthly mean water temperatures (°F)	Below Keswick Dam	60	All Years	-1.3	0.0	0.0								0.0	-3.3	-1.7		
				64	All Years	0.0	0.0	0.0								0.0	-2.0	-1.4		
				68	All Years	0.0	0.0	0.0								0.0	0.0	0.0		
			Below Red Bluff Diversion Dam	60	All Years	-2.0	0.0	0.0									-1.9	-5.0	-4.7	
				64	All Years	0.0	0.0	0.0									0.0	-3.4	-3.3	
				68	All Years	0.0	0.0	0.0									0.0	0.0	0.0	
			Feather River Confluence	60	All Years	-10.0	0.0	0.0									0.0	0.0	0.0	
				64	All Years	-0.2	0.0	0.0									0.0	0.0	-1.4	
				68	All Years	0.0	0.0	0.0									-2.0	0.0	-3.4	
			Freeport	60	All Years	-2.5	0.0	0.0									0.0	0.0	0.0	
				64	All Years	-0.1	0.0	0.0									0.0	0.0	-1.8	
				68	All Years	0.0	0.0	0.0									0.0	0.0	-7.5	
Spawning, egg incubation, and initial rearing	October through March	Monthly mean water temperatures (°F)	Below Keswick Dam	56	All Years	-7.4	0.4	0.0	0.0	0.0	0.0	0.0								
				58	All Years	-3.3	0.0	0.0	0.0	0.0	0.0	0.0								
				60	All Years	-1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
			Ball's Ferry	62	All Years	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				56	All Years	-4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				58	All Years	-3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
			Jelly's Ferry	60	All Years	-2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				56	All Years	-6.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4							
			Bend Bridge	58	All Years	-3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				60	All Years	-2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
			Below Red Bluff Diversion Dam	56	All Years	-6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1						
				58	All Years	-3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				60	All Years	-2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
			Below Red Bluff Diversion Dam	62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				56	All Years	-5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7						
				58	All Years	-3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
60	All Years	-2.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0										
62	All Years	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0										
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Red Bluff Diversion Dam	60	All Years	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	-0.7	-1.9	-5.0	-4.7			
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	-3.6	-3.3			
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.2	-2.7			
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
			Feather River Confluence	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				60	All Years	-10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0		
				63	All Years	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	1.3	0.0	0.0	-0.7		
				65	All Years	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	-1.3	0.0	0.0	1.2		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-0.6	-2.0	0.0	-3.4		
			Freeport	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	-3.3	-8.7	-5.0		
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.7	-3.0	0.0		
				60	All Years	-2.5	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.8	0.0	0.0	0.0	0.0		
				63	All Years	-4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.6	0.0	0.0	-0.2		
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	0.2	0.0	0.0	-1.4		
68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	0.0	0.0	-7.5					
70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	-2.3	-5.3	0.0	-8.9					
75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	0.0					

Table AQ-T-3-7d

Late Fall-run Chinook Salmon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative														
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep			
Adult Immigration and Holding	October through April	Monthly mean water temperatures (°F)	Below Keswick Dam	60	All Years	-1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
			Below Red Bluff Diversion Dam	60	All Years	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
			Feather River Confluence	60	All Years	-10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7						
				64	All Years	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9						
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
			Freeport	60	All Years	-2.5	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.8						
				64	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8						
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Spawning, egg incubation, and initial rearing	January through May	Monthly mean water temperatures (°F)	Below Keswick Dam	56	All Years				0.0	0.0	0.0	0.0	0.0							
				58	All Years				0.0	0.0	0.0	0.0	0.0	0.0						
				60	All Years				0.0	0.0	0.0	0.0	0.0	0.0						
				62	All Years				0.0	0.0	0.0	0.0	0.0	0.0						
			Ball's Ferry	56	All Years						0.0	0.0	0.0	0.0	-1.8					
				58	All Years						0.0	0.0	0.0	0.0	0.0					
				60	All Years						0.0	0.0	0.0	0.0	0.0					
			Jelly's Ferry	62	All Years						0.0	0.0	0.0	0.0	0.0					
				56	All Years						0.0	0.0	0.0	1.4	-6.3					
				58	All Years						0.0	0.0	0.0	0.0	-1.1					
			Bend Bridge	60	All Years						0.0	0.0	0.0	0.0	0.0					
				62	All Years						0.0	0.0	0.0	0.0	0.0					
56	All Years							0.0	0.0	0.0	1.1	4.0								
58	All Years							0.0	0.0	0.0	0.0	-2.2								
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Red Bluff Diversion Dam	60	All Years	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	-0.7	-1.9	-5.0	-4.7			
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	-3.6	-3.3			
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.2	-2.7			
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
			Feather River Confluence	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				60	All Years	-10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0		
				63	All Years	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	1.3	0.0	0.0	-0.7		
				65	All Years	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	-1.3	0.0	0.0	1.2		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-0.6	-2.0	0.0	-3.4		
			Freeport	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	-3.3	-8.7	-5.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.7	-3.0	0.0	
60	All Years	-2.5		0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.8	0.0	0.0	0.0	0.0	0.0				
63	All Years	-4.4		0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.6	0.0	0.0	0.0	0.0	-0.2				
65	All Years	0.0		0.0	0.0	0.0	0.0	0.0	0.0	-0.4	0.2	0.0	0.0	0.0	0.0	-1.4				
Freeport	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	0.0	0.0	-7.5				
	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	-2.3	-5.3	0.0	-8.9				
	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	0.0	0.0				

Table AQ-T-3-7e
Steelhead in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative													
						Description	Value	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	August through March	Monthly mean water temperatures (°F)	Below Keswick Dam	52	All Years	-5.3	-8.3	-0.6	0.0	0.0	0.0						-9.0	-5.3	
				56	All Years	-7.4	0.4	0.0	0.0	0.0	0.0							-3.7	-4.3
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	0.0
			Below Red Bluff Diversion Dam	52	All Years	-1.2	-7.5	0.0	0.0	0.0	0.0	0.9						0.0	0.0
				56	All Years	-5.2	0.0	0.0	0.0	0.0	0.0							0.9	-3.3
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	0.0
			Feather River Confluence	52	All Years	0.0	2.5	0.0	0.0	0.6	1.2							0.0	0.0
				56	All Years	0.0	0.0	0.0	0.0	0.0	2.5							0.0	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0							-8.7	-5.0
			Freeport	52	All Years	0.0	0.0	0.0	1.2	1.2								0.0	0.0
				56	All Years	0.0	-0.2	0.0	0.0	1.2								0.0	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0								0.0	-8.9
Spawning and egg incubation	December through April	Monthly mean water temperatures (°F)	Below Keswick Dam	52	All Years		-0.6	0.0	0.0	0.0	2.2								
				54	All Years			0.0	0.0	0.0	0.0								
				57	All Years			0.0	0.0	0.0	0.0								
				60	All Years			0.0	0.0	0.0	0.0								
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Keswick Dam	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-2.5		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Ball's Ferry	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.7	-0.7	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Jelly's Ferry	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.4	-1.4	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Bend Bridge	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Below Red Bluff Diversion Dam	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.2	-2.7	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
75	All Years	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Smolt Emigration	October through May	Monthly mean water temperatures (°F)	Below Red Bluff Diversion Dam	52	All Years	-1.2	-7.5	0.0	0.0	0.0	0.9	4.6	0.0						
				55	All Years	-11.6	0.0	0.0	0.0	0.0	0.0	7.4	7.0						
			Feather River Confluence	59	All Years	-0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.7					
				52	All Years	0.0	2.5	0.0	0.0	0.6	1.2	0.0	0.0						
				55	All Years	0.0	0.6	0.0	0.0	0.0	6.2	0.0	0.0						
			Freeport	59	All Years	0.3	0.0	0.0	0.0	0.0	0.0	0.7	0.0						
				52	All Years	0.0	0.0	0.0	0.0	1.2	1.2	0.0	0.0						
				55	All Years	0.0	-1.2	0.0	0.0	0.0	2.5	0.0	0.0						
			59	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0							

Table AQ-T-3-7f
Green Sturgeon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative													
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	February through December	Monthly mean water temperatures (°F)	Below Keswick Dam	61	All Years	-1.7	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.4	-1.8	
				66	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.2
			Below Delevan Intake	61	All Years	-0.3	0.0	0.0		0.0	0.0	2.8	2.6	-0.5	0.0	0.0	0.0	0.0	0.1
				66	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	-2.1	-5.9	-0.2	-3.0	0.0	
			Freeport	61	All Years	-0.7	0.0	0.0		0.0	0.0	2.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
				66	All Years	-0.2	0.0	0.0		0.0	0.0	0.0	0.0	1.3	-0.2	0.0	0.0	0.0	-1.2
Spawning and Egg Incubation	March through September	Monthly mean water temperatures (°F)	Below Keswick Dam	64	All Years						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				68	All Years							0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Below Red Bluff Diversion Dam	64	All Years							0.0	0.0	0.0	0.0	0.0	0.0	-3.4	-3.3
				68	All Years							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Wilkins Slough	64	All Years							0.0	0.0	6.2	-1.1	-1.8	0.0	0.5	
				68	All Years							0.0	0.0	0.0	-3.4	-6.2	-4.1	-0.8	
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below RBDD	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.5	-1.0		
			Below Delevan Intake	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.1	-5.9	-0.2	-3.0		
			Freeport	66	All Years	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-0.2	0.0	0.0	-1.2		

Table AQ-T-3-7g
White Sturgeon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	November through May	Monthly mean water temperatures (°F)	Hamilton City	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
			Below the Delevan Intake	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
			Freeport	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Spawning and Egg Incubation	February through May	Monthly mean water temperatures (°F)	Hamilton City	61	All Years					0.0	0.0	0.0	1.0				
				68	All Years					0.0	0.0	0.0	0.0				
			Below the Delevan Intake	61	All Years					0.0	0.0	2.8	2.6				
				68	All Years					0.0	0.0	0.0	0.0				
			Below the Feather River Confluence	61	All Years					0.0	0.0	3.1	0.0				
		68	All Years					0.0	0.0	0.0	1.3						
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Delevan Intake	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.1	-5.9	-0.2	-3.0
			Knights Landing	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.7	-3.6	-1.3	-0.7	-3.4
			Freeport	66	All Years	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-0.2	0.0	0.0	-1.2

Table AQ-T-3-7h
Pacific Lamprey in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative													
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Below Keswick Dam	50-64	All Years					0.0	0.0	0.7	6.9	0.8	3.7	-0.2	2.0		
			Below Red Bluff Diversion Dam	50-64	All Years					0.0	0.0	3.6	-0.2	0.0	0.0	0.0	0.0	3.4	
			Below the Delevan Intake	50-64	All Years					0.0	-0.1	0.7	0.0	0.5	10.8	9.8	-1.9		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Keswick Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Below the Delevan Intake	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Freeport	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-6.9	-7.5	-0.1	

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-7i
River Lamprey in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative													
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Spawning and Egg Incubation	February through July	Monthly mean water temperatures (°F)	Below Keswick Dam	50-64	All Years						0.0	0.7	6.9	0.8	3.7	-0.2			
			Below Red Bluff Diversion Dam	50-64	All Years						0.0	3.6	-0.2	0.0	0.0	0.0			
			Below the Delevan Intake	50-64	All Years						-0.1	0.7	0.0	0.5	10.8	9.8			
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Keswick Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Below the Delevan Intake	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Freeport	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-6.9	-7.5	-0.1	

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-7j
Hardhead in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative													
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adults and Other Lifestages	Year-round	Monthly mean water temperatures (°F)	Below Keswick Dam	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-2.5	
			Below the Delevan Intake	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	-11.2	-9.5	-3.9	-5.3		
			Freeport	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	0.2	0.0	0.0	0.0	-1.4		
Adult Spawning	April through June	Monthly mean water temperatures (°F)	Below Keswick Dam	59-64	All Years								0.0	0.0	0.0				
			Below the Delevan Intake	59-64	All Years								6.2	1.5	10.8				
			Freeport	59-64	All Years								-0.7	-1.2	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-71
Splittail in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Spawning	February through May	Monthly mean water temperatures (°F)	Below the Delevan Intake	45-75	All Years						0.1	0.0	0.0	0.0				
			Freeport	45-75	All Years						0.0	0.0	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-7m

Striped Bass in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	Below the Delevan Intake	59-68	All Years								6.2	1.0	0.0			
			Below the Feather River Confluence	59-68	All Years									0.7	-1.3	0.6		
Larvae, Fry, and Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Delevan Intake	61-71	All Years	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	2.8	2.6	-0.5	0.0	1.7	0.1
			Below the Feather River Confluence	61-71	All Years	-8.8	0.0	0.0	0.0	0.0	0.0	0.0	3.1	-1.3	3.7	15.6	6.3	2.2

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-7n
American Shad in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	Below Red Bluff Diversion Dam	60-70	All Years								0.0	-1.6	-0.7			
			Below the Feather River Confluence	60-70	All Years								2.7	0.5	0.0			
			Freeport	60-70	All Years								0.8	-1.9	2.3			
Larvae, Fry, and Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Delevan Intake	63-77	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	-4.9	-7.3	-1.0	5.1	
			Below the Feather River Confluence	63-77	All Years	0.5	0.0	0.0	0.0	0.0	0.0	3.1	1.3	0.0	0.0	0.0	-0.7	
			Freeport	63-77	All Years	-4.4	0.0	0.0	0.0	0.0	0.0	1.3	0.6	0.0	0.6	0.0	-0.2	

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-7o
Largemouth Bass in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative													
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Spawning	March through June	Monthly mean water temperatures (°F)	Below Keswick Dam	59-75	All Years							0.0	0.0	0.0	0.0				
			Below the Delevan Intake	59-75	All Years							0.0	6.2	1.0	0.0				
			Freeport	59-75	All Years							0.0	0.1	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-7p
Delta Smelt in the Delta

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult	December through May	Monthly mean water temperatures (°F)	Sacramento River at Freeport	59-68	All Years				0.0	0.0	0.0	0.0	0.1	0.5				
Spawning and Egg Incubation	February through May	Monthly mean water temperatures (°F)	Sacramento River at Freeport	59-68	All Years					0.0	0.0	0.1	0.5					
Larval	March through June	Monthly mean water temperatures (°F)	Sacramento River at Freeport	59-68	All Years						0.0	0.1	0.5	0.0				
Juvenile	May through July	Monthly mean water temperatures (°F)	Sacramento River at Freeport	59-68	All Years								0.5	0.0	0.0			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

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Alternative D Compared to No Action Alternative

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Table AQ-T-3-9a
Winter-run Chinook Salmon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative									
			Description	Value			Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	December through July	Monthly mean water temperatures (°F)	Below Keswick Dam	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Below RBDD	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	0.1	-1.7		
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Feather River Confluence	60	All Years	0.0	0.0	0.0	0.0	2.5	0.1	0.0	0.0			
				64	All Years	0.0	0.0	0.0	0.0	1.3	0.6	0.0	0.0			
				68	All Years	0.0	0.0	0.0	0.0	0.0	-0.4	-0.2	-1.0			
			Freeport	60	All Years	0.0	0.0	0.0	-0.1	0.8	0.0	0.0	0.0			
				64	All Years	0.0	0.0	0.0	0.0	1.2	1.2	0.0	0.0			
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0			
Spawning, egg incubation, and initial rearing	April through August	Monthly mean water temperatures (°F)	Below Keswick Dam	56	All Years					0.0	0.0	0.0	-3.5	-4.0		
				58	All Years					0.0	0.0	0.0	-1.0	-3.4		
				60	All Years					0.0	0.0	0.0	0.0	-3.4		
				62	All Years					0.0	0.0	0.0	0.0	-3.5		
			Ball's Ferry	56	All Years					0.0	-3.2	-0.7	-1.9	1.9		
				58	All Years					0.0	0.0	-0.3	-3.7	-5.1		
				60	All Years					0.0	0.0	0.0	-0.6	-3.6		
				62	All Years					0.0	0.0	0.0	0.0	-3.5		
			Jelly's Ferry	56	All Years					1.0	-12.2	3.7	3.4	-2.8		
				58	All Years					0.0	-3.0	0.7	-0.5	-7.7		
				60	All Years					0.0	0.0	0.0	-1.2	-4.0		
				62	All Years					0.0	0.0	0.0	0.0	-3.5		
Bend Bridge	56	All Years					0.9	1.6	-2.2	0.2	-0.9					
	58	All Years					0.0	-3.7	-0.1	-1.7	-3.3					
	60	All Years					0.0	0.0	0.0	-1.2	-5.4					
	62	All Years					0.0	0.0	0.0	-0.4	-3.6					
Juvenile Rearing and Emigration	July through April	Monthly mean water temperatures (°F)	Below Keswick Dam	60	All Years	0.0	0.0	0.0	0.0	0.0			0.0	-3.4	-2.6	
				63	All Years	0.0	0.0	0.0	0.0	0.0			0.0	-3.0	-3.3	
				65	All Years	0.0	0.0	0.0	0.0	0.0			0.0	-0.4	-2.5	
				68	All Years	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	
			Below RBDD	60	All Years	0.0	0.0	0.0	0.0	0.0				-1.7	-5.3	-6.5
				63	All Years	0.0	0.0	0.0	0.0	0.0				-0.6	-3.6	-4.1
				65	All Years	0.0	0.0	0.0	0.0	0.0				0.0	-3.5	-2.9
				68	All Years	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
			Feather River Confluence	60	All Years	0.0	0.0	0.0	0.0	2.5				0.0	0.0	0.0
				63	All Years	0.0	0.0	0.0	0.0	1.9				0.0	0.0	-0.7
				65	All Years	0.0	0.0	0.0	0.0	1.5				0.0	0.0	0.6
				68	All Years	0.0	0.0	0.0	0.0	0.0				-1.0	0.0	-3.4
				70	All Years	0.0	0.0	0.0	0.0	0.0				-2.1	-3.7	-2.5
			Freeport	60	All Years	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
				63	All Years	0.0	0.0	0.0	0.0	-0.1	0.8			0.0	0.0	0.0
				65	All Years	0.0	0.0	0.0	0.0	0.0	-0.4			0.0	0.0	-0.9
68	All Years	0.0		0.0	0.0	0.0	0.0	0.0			0.0	0.0	-2.5			
70	All Years	0.0		0.0	0.0	0.0	0.0	0.0			-3.9	2.1	-4.4			
75	All Years	0.0	0.0	0.0	0.0	0.0	0.0			-0.2	0.0	0.0				

Table AQ-T-3-9c
Fall-run Chinook Salmon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative														
						Description	Value	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Immigration and Holding	July through December	Monthly mean water temperatures (°F)	Below Keswick Dam	60	All Years	-0.3	0.0	0.0								0.0	-3.4	-2.6		
				64	All Years	0.0	0.0	0.0								0.0	-2.0	-3.1		
				68	All Years	0.0	0.0	0.0								0.0	0.0	0.0		
			Below Red Bluff Diversion Dam	60	All Years	-1.7	0.0	0.0									-1.7	-5.3	-6.5	
				64	All Years	0.0	0.0	0.0									0.0	-3.5	-5.9	
				68	All Years	0.0	0.0	0.0									0.0	0.0	0.0	
			Feather River Confluence	60	All Years	-8.7	0.0	0.0									0.0	0.0	0.0	
				64	All Years	0.0	0.0	0.0									0.0	0.0	-0.6	
				68	All Years	0.0	0.0	0.0									-1.0	0.0	-3.4	
			Freeport	60	All Years	-1.2	0.0	0.0									0.0	0.0	0.0	
				64	All Years	0.3	0.0	0.0									0.0	0.0	-1.8	
				68	All Years	0.0	0.0	0.0									0.0	0.0	-2.5	
Spawning, egg incubation, and initial rearing	October through March	Monthly mean water temperatures (°F)	Below Keswick Dam	56	All Years	-9.2	0.3	0.0	0.0	0.0	0.0	0.0								
				58	All Years	-3.3	0.0	0.0	0.0	0.0	0.0	0.0								
				60	All Years	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
			Ball's Ferry	62	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				56	All Years	-5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				58	All Years	-2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
			Jelly's Ferry	60	All Years	-1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				56	All Years	-6.6	0.0	0.0	0.0	0.0	0.0	0.0	1.0							
			Bend Bridge	58	All Years	-3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				60	All Years	-1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
			Below Red Bluff Diversion Dam	56	All Years	-7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9						
				58	All Years	-3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				60	All Years	-1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
			Below Red Bluff Diversion Dam	62	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
				56	All Years	-5.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5							
				58	All Years	-4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
60	All Years	-1.7		0.0	0.0	0.0	0.0	0.0	0.0	0.0										
62	All Years	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0										
60	All Years	-1.7		0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	0.1	-1.7	-5.3	-6.5					
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Red Bluff Diversion Dam	60	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	-3.6	-4.1	
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Feather River Confluence	60	All Years	-8.7	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.1	0.0	0.0	0.0	0.0	0.0	
				63	All Years	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.3	0.0	0.0	0.0	0.0	-0.7	
				65	All Years	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.5	-1.3	0.0	0.0	0.0	0.0	0.6	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-0.2	-1.0	0.0	-3.4		
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.2	-2.1	-3.7	-2.5		
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.2	0.0		
			Freeport	60	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.8	0.0	0.0	0.0	0.0	0.0	
				63	All Years	-5.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.6	0.0	0.0	0.0	-1.0		
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	0.2	0.0	0.0	0.0	-0.9		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.0	-2.5		
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	-1.7	-3.9	2.1	-4.4		
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	0.0	

Table AQ-T-3-9d

Late Fall-run Chinook Salmon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative														
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep			
Adult Immigration and Holding	October through April	Monthly mean water temperatures (°F)	Below Keswick Dam	60	All Years	-0.3	0.0	0.0	0.0	0.0	0.0	0.0								
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
			Below Red Bluff Diversion Dam	60	All Years	-1.7	0.0	0.0	0.0	0.0	0.0	0.0								
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
			Feather River Confluence	60	All Years	-8.7	0.0	0.0	0.0	0.0	0.0	0.0	2.5							
				64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3							
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
			Freeport	60	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	-0.1	0.8							
				64	All Years	0.3	0.0	0.0	0.0	0.0	0.0	0.0	1.2							
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Spawning, egg incubation, and initial rearing	January through May	Monthly mean water temperatures (°F)	Below Keswick Dam	56	All Years				0.0	0.0	0.0	0.0	0.0							
				58	All Years				0.0	0.0	0.0	0.0	0.0							
				60	All Years				0.0	0.0	0.0	0.0	0.0							
				62	All Years				0.0	0.0	0.0	0.0	0.0							
			Ball's Ferry	56	All Years				0.0	0.0	0.0	0.0	0.0	-3.2						
				58	All Years				0.0	0.0	0.0	0.0	0.0	0.0						
				60	All Years				0.0	0.0	0.0	0.0	0.0	0.0						
			Jelly's Ferry	62	All Years				0.0	0.0	0.0	0.0	0.0	0.0						
				56	All Years				0.0	0.0	0.0	0.0	1.0	-12.2						
				58	All Years				0.0	0.0	0.0	0.0	0.0	-3.0						
			Bend Bridge	60	All Years				0.0	0.0	0.0	0.0	0.0	0.0						
				62	All Years				0.0	0.0	0.0	0.0	0.0	0.0						
56	All Years					0.0	0.0	0.0	0.0	0.9	1.6									
58	All Years					0.0	0.0	0.0	0.0	0.0	-3.7									
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Red Bluff Diversion Dam	60	All Years	-1.7	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	0.1	-1.7	-5.3	-6.5			
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	-3.6	-4.1			
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.5	-2.9			
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
			Feather River Confluence	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				60	All Years	-8.7	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.1	0.0	0.0	0.0	0.0		
				63	All Years	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.3	0.0	0.0	0.0	-0.7		
				65	All Years	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.5	-1.3	0.0	0.0	0.0	0.6		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-0.2	-1.0	0.0	-3.4		
			Freeport	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.2	-2.1	-3.7	-2.5		
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.2	0.0		
				60	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.8	0.0	0.0	0.0	0.0		
				63	All Years	-5.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.6	0.0	0.0	0.0	-1.0		
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	0.2	0.0	0.0	0.0	-0.9		
	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.0	-2.5					
	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	-1.7	-3.9	2.1	-4.4					
	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	0.0					

Table AQ-T-3-9e
Steelhead in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative													
						Description	Value	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	August through March	Monthly mean water temperatures (°F)	Below Keswick Dam	52	All Years	-5.9	-5.7	1.1	0.0	0.0	0.0						-1.9	-5.6	
				56	All Years	-9.2	0.3	0.0	0.0	0.0	0.0							-4.0	-5.4
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0							0.0	0.0
			Below Red Bluff Diversion Dam	52	All Years	-0.8	-7.2	0.0	0.0	0.0	0.0	-0.4						0.0	0.0
				56	All Years	-5.0	0.0	0.0	0.0	0.0	0.0	0.0						0.9	-1.9
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0	0.0
			Feather River Confluence	52	All Years	0.0	2.5	0.0	0.0	1.9	1.2							0.0	0.0
				56	All Years	0.0	-0.4	0.0	0.0	0.0	2.5							0.0	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0							-3.7	-2.5
			Freeport	52	All Years	0.0	1.2	0.0	0.0	1.2	1.2							0.0	0.0
				56	All Years	0.0	-0.2	0.0	0.0	0.0	1.2							0.0	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0							2.1	-4.4
Spawning and egg incubation	December through April	Monthly mean water temperatures (°F)	Below Keswick Dam	52	All Years			1.1	0.0	0.0	0.0	1.1							
				54	All Years			0.0	0.0	0.0	0.0	0.0							
				57	All Years			0.0	0.0	0.0	0.0	0.0							
				60	All Years			0.0	0.0	0.0	0.0	0.0							
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Keswick Dam	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-2.5	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Ball's Ferry	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.7	-0.1
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Jelly's Ferry	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.5	-0.8
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Bend Bridge	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below Red Bluff Diversion Dam	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.5	-2.9
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Smolt Emigration	October through May	Monthly mean water temperatures (°F)	Below Red Bluff Diversion Dam	52	All Years	-0.8	-7.2	0.0	0.0	0.0	-0.4	4.3	0.0						
				55	All Years	-11.4	0.0	0.0	0.0	0.0	0.0	3.7	4.2						
				59	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.0					
			Feather River Confluence	52	All Years	0.0	2.5	0.0	0.0	1.9	1.2	0.0	0.0						
				55	All Years	0.0	0.6	0.0	0.0	0.0	5.0	0.0	0.0						
				59	All Years	-0.9	0.0	0.0	0.0	0.0	0.0	-0.6	0.0						
			Freeport	52	All Years	0.0	1.2	0.0	0.0	1.2	1.2	0.0	0.0						
				55	All Years	0.0	-3.1	0.0	0.0	0.0	2.5	0.0	0.0						
				59	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0						

Table AQ-T-3-9f
Green Sturgeon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Immigration and Holding	February through December	Monthly mean water temperatures (°F)	Below Keswick Dam	61	All Years	-1.9	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.5	-4.0
				66	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below Delevan Intake	61	All Years	-0.2	0.0	0.0		0.0	0.0	1.9	0.2	-0.4	0.0	0.0	0.0	1.8
				66	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.9	-2.4	-0.5	-5.4	
			Freeport	61	All Years	-0.7	0.0	0.0		0.0	0.0	1.2	0.1	0.0	0.0	0.0	0.0	0.0
				66	All Years	0.1	0.0	0.0		0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	-1.8
Spawning and Egg Incubation	March through September	Monthly mean water temperatures (°F)	Below Keswick Dam	64	All Years						0.0	0.0	0.0	0.0	0.0	0.0	-2.0	-3.1
				68	All Years						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below Red Bluff Diversion Dam	64	All Years						0.0	0.0	0.0	0.0	0.0	0.0	-3.5	-5.9
				68	All Years						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Wilkins Slough	64	All Years						0.0	0.0	1.4	0.9	-1.3	0.0	0.6	
				68	All Years						0.0	0.0	0.0	-1.7	-4.9	0.0	-0.3	
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below RBDD	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.8	-1.0	
			Below Delevan Intake	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	-2.4	-0.5	-5.4	
			Freeport	66	All Years	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	-1.8	

Table AQ-T-3-9g
White Sturgeon in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	November through May	Monthly mean water temperatures (°F)	Hamilton City	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
			Below the Delevan Intake	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
			Freeport	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Spawning and Egg Incubation	February through May	Monthly mean water temperatures (°F)	Hamilton City	61	All Years						0.0	0.0	0.0	-0.8			
				68	All Years						0.0	0.0	0.0	0.0			
			Below the Delevan Intake	61	All Years						0.0	0.0	1.9	0.2			
				68	All Years						0.0	0.0	0.0	0.0			
			Below the Feather River Confluence	61	All Years						0.0	0.0	0.6	0.1			
		68	All Years						0.0	0.0	0.0	-0.4					
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Delevan Intake	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	-2.4	-0.5	-5.4
			Knights Landing	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	-3.2	0.0	0.0	-1.4
			Freeport	66	All Years	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0

Table AQ-T-3-9h
Pacific Lamprey in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative													
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Below Keswick Dam	50-64	All Years					0.0	0.0	0.3	6.1	0.1	2.7	0.1	2.0		
			Below Red Bluff Diversion Dam	50-64	All Years					0.0	0.0	4.2	-0.2	0.0	0.0	0.0	0.0	3.5	
			Below the Delevan Intake	50-64	All Years					0.0	-0.1	0.5	0.0	1.0	-2.0	-0.7	-6.4		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Keswick Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Delevan Intake	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Freeport	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-1.9	-5.0	0.0	

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-9i
River Lamprey in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	February through July	Monthly mean water temperatures (°F)	Below Keswick Dam	50-64	All Years						0.0	0.3	6.1	0.1	2.7	0.1		
			Below Red Bluff Diversion Dam	50-64	All Years						0.0	4.2	-0.2	0.0	0.0	0.0		
			Below the Delevan Intake	50-64	All Years						-0.1	0.5	0.0	1.0	-2.0	-0.7		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below Keswick Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Delevan Intake	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Freeport	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-1.9	-5.0	0.0

*Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-9j
Hardhead in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative													
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adults and Other Lifestages	Year-round	Monthly mean water temperatures (°F)	Below Keswick Dam	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-2.5	
			Below the Delevan Intake	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	-5.0	-1.2	2.3	-4.9		
			Freeport	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	0.2	0.0	0.0	0.0	0.0	-0.9	
Adult Spawning	April through June	Monthly mean water temperatures (°F)	Below Keswick Dam	59-64	All Years								0.0	0.0	0.0				
			Below the Delevan Intake	59-64	All Years								5.6	2.1	-2.0				
			Freeport	59-64	All Years								-1.2	-1.2	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-9I
Splittail in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Spawning	February through May	Monthly mean water temperatures (°F)	Below the Delevan Intake	45-75	All Years						0.2	0.0	0.0	0.0				
			Freeport	45-75	All Years						0.0	0.0	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-9m
Striped Bass in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	Below the Delevan Intake	59-68	All Years								5.6	1.1	0.0			
			Below the Feather River Confluence	59-68	All Years									-0.6	0.4	0.2		
Larvae, Fry, and Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Delevan Intake	61-71	All Years	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.2	-0.4	0.0	1.7	1.8
			Below the Feather River Confluence	61-71	All Years	-11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	2.5	7.5	1.3	0.7

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-9n
American Shad in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	Below Red Bluff Diversion Dam	60-70	All Years							0.0	-1.6	0.1			
			Below the Feather River Confluence	60-70	All Years							2.5	0.1	1.2			
			Freeport	60-70	All Years							0.8	-0.2	1.7			
Larvae, Fry, and Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Delevan Intake	63-77	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	7.2	0.1	1.1	4.1
			Below the Feather River Confluence	63-77	All Years	1.3	0.0	0.0	0.0	0.0	0.0	1.9	1.3	0.0	0.0	0.0	-0.7
			Freeport	63-77	All Years	-5.0	0.0	0.0	0.0	0.0	0.0	2.5	0.6	0.0	0.4	0.0	-1.0

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-9o
Largemouth Bass in the Sacramento River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative													
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Spawning	March through June	Monthly mean water temperatures (°F)	Below Keswick Dam	59-75	All Years							0.0	0.0	0.0	0.0				
			Below the Delevan Intake	59-75	All Years							0.0	5.6	1.1	0.0				
			Freeport	59-75	All Years							0.0	0.0	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-3-9p
Delta Smelt in the Delta

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult	December through May	Monthly mean water temperatures (°F)	Sacramento River at Freeport	59-68	All Years				0.0	0.0	0.0	0.0	0.0	-0.2				
Spawning and Egg Incubation	February through May	Monthly mean water temperatures (°F)	Sacramento River at Freeport	59-68	All Years					0.0	0.0	0.0	-0.2					
Larval	March through June	Monthly mean water temperatures (°F)	Sacramento River at Freeport	59-68	All Years						0.0	0.0	-0.2	-0.3				
Juvenile	May through July	Monthly mean water temperatures (°F)	Sacramento River at Freeport	59-68	All Years								-0.2	-0.3	0.0			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

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Appendix 12E
Fisheries Water Temperature
Assessment Summary Tables
Feather River

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Alternative A Compared to No Action Alternative

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Table AQ-T-4-3a

Spring-run Chinook Salmon in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative													
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	March through October	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	60	All Years	-1.0						0.0	0.0	0.0	0.0	0.0	-3.7	0.0		
				64	All Years	0.0						0.0	0.0	0.0	0.0	0.0	0.1	2.2	0.0	
				68	All Years	0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Thermalito Afterbay Outlet	60	All Years	-1.9						0.0	1.3	-1.2	0.0	0.0	0.0	0.0	0.0	0.6
				64	All Years	0.0						0.0	0.0	-1.3	1.4	0.0	0.0	0.0	0.0	5.0
				68	All Years	0.0						0.0	0.0	0.0	1.3	1.2	-4.2	-1.2		
			Mouth of the Lower Feather River	60	All Years	3.1						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				64	All Years	-0.4						0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				68	All Years	0.0						0.0	0.0	0.6	0.0	0.0	0.0	0.0	-3.3	
Adult Spawning and Embryo Incubation	September through April	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	56	All Years	-1.6	-1.9	0.0	0.0	0.0	0.0	0.0	0.0						-3.8	
				58	All Years	-0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.1	
				60	All Years	-1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0	
			Below the Thermalito Afterbay Outlet	62	All Years	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0	
				56	All Years	0.0	0.0	0.0	0.0	0.0	-2.0	0.6							0.0	
				58	All Years	6.2	0.0	0.0	0.0	0.0	0.0	-2.5							0.0	
			Mouth of the Lower Feather River	60	All Years	-1.9	0.0	0.0	0.0	0.0	0.0	0.0	1.3						0.6	
				62	All Years	-1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0						-6.3	
				68	All Years	-1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.7	0.0	
Juvenile Rearing and Emigration	Year-round	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Below the Thermalito Afterbay Outlet	60	All Years	-1.9	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-1.2	0.0	0.0	0.0	0.0	0.0	0.6
				63	All Years	-0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	0.1	0.0	0.0	0.0	0.9	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.8	0.0	0.0	0.0	0.0	-0.6	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.2	-4.2	-1.2		
Mouth of the Lower Feather River	70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	-2.4	7.5	0.0					
	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0				
	60	All Years	-1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
	63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Smolt Emigration	October through June	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
				60	All Years	-1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	-1.2	0.0				
				63	All Years	-0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	0.1				
			Below the Thermalito Afterbay Outlet	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.8	0.0				
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3				
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5				
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
				60	All Years	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
			Mouth of the Lower Feather River	63	All Years	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
				65	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0				
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.2			
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.7				

Table AQ-T-4-3c

Steelhead in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative												
			Description				Value	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	August through April	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	52	All Years	0.0	0.0	-1.9	0.0	0.0	0.0	2.3	3.8				0.0	0.0	
				56	All Years	-1.6	-1.9	0.0	0.0	0.0	0.0	0.0	0.0					0.0	-3.8
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0
			Below the Thermalito Afterbay Outlet	52	All Years	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	0.0					0.0	0.0
				56	All Years	0.0	0.0	0.0	0.0	0.0	0.0	-2.0	0.6					0.0	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				7.5	0.0	
			Mouth of the Lower Feather River	52	All Years	0.0	0.0	0.0	0.0	0.0	-1.2	-1.3	0.0					0.0	0.0
				56	All Years	0.0	0.3	0.0	0.0	0.0	0.0	-1.3	0.0					0.0	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	-5.0	
Adult Spawning and Embryo Incubation	December through May	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	52	All Years			-1.9	0.0	0.0	2.3	3.8	0.0						
				54	All Years			0.0	0.0	0.0	-0.4	-0.2	0.0						
				57	All Years			0.0	0.0	0.0	0.0	0.0	0.0	1.2					
			Below the Thermalito Afterbay Outlet	60	All Years			0.0	0.0	0.0	0.0	0.0	0.0	0.0					
				52	All Years			0.0	0.0	-0.2	0.0	0.0	0.0	0.0					
				54	All Years			0.0	0.0	0.0	0.0	0.0	0.0	0.0					
			Mouth of the Lower Feather River	57	All Years			0.0	0.0	0.0	0.0	-3.3	0.0	0.0					
				60	All Years			0.0	0.0	0.0	0.0	0.0	0.0	1.3	-1.2				
				75	All Years			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0
Juvenile Rearing and Emigration	Year-round	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Below the Thermalito Afterbay Outlet	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				63	All Years	-0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	0.1	0.0	0.0	0.0	0.9
			Mouth of the Lower Feather River	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.8	0.0	0.0	0.0	0.0	-0.6
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.2	-4.2	-1.2	
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	1.3	0.0	
Smolt Emigration	October through May	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	52	All Years	0.0	0.0	-1.9	0.0	0.0	2.3	3.8	0.0						
				55	All Years	0.6	-3.3	0.0	0.0	0.0	-0.4	0.0	0.5						
				59	All Years	-0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
			Below the Thermalito Afterbay Outlet	52	All Years	0.0	0.0	0.0	0.0	-0.2	0.0	0.0	0.0						
				55	All Years	0.0	-2.5	0.0	0.0	0.0	-0.4	0.0	0.0						
				59	All Years	-0.6	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0					
			Mouth of the Lower Feather River	52	All Years	0.0	0.0	0.0	0.0	-1.2	-1.3	0.0	0.0						
				55	All Years	0.0	1.3	0.0	0.0	0.0	-2.5	0.0	0.0						
				59	All Years	0.3	0.0	0.0	0.0	0.0	-0.1	0.0	0.0						

Table AQ-T-4-3d

Green Sturgeon in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative														
			Description	Criteria Value	Range	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	February through December	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	61	All Years	-0.6	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	-6.8	0.0	
				64	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.2	0.0
				68	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Thermalito Afterbay Outlet	61	All Years	1.2	0.0	0.0		0.0	0.0	1.1	-1.3	0.0	0.0	0.0	0.0	0.0	0.6
				64	All Years	0.0	0.0	0.0		0.0	0.0	0.0	-1.3	1.4	0.0	0.0	0.0	5.0	
				68	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	1.3	1.2	-4.2	-1.2		
			Mouth of the Lower Feather River	61	All Years	2.5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				64	All Years	-0.4	0.0	0.0		0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	
				68	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.6	0.0	0.0	0.0	-3.3		
Adult Spawning and Embryo Incubation	March through August	Monthly Mean Water Temperatures (°F)	Below the Thermalito Afterbay Outlet	64	All Years					0.0	0.0	-1.3	1.4	0.0	0.0	5.0			
				68	All Years					0.0	0.0	0.0	1.3	1.2	-4.2				
Juvenile Rearing	Year-round	Monthly Mean Water Temperatures (°F)	Below the Thermalito Afterbay Outlet	64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	-1.3	1.4	0.0	0.0	5.0			
				66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	5.0	0.0	0.0	1.3			
			Mouth of the Lower Feather River	64	All Years	-0.4	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0		
				66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2	0.0	0.0	0.0			
Juvenile Emigration	May through September	Monthly Mean Water Temperatures (°F)	Below the Thermalito Afterbay Outlet	66	All Years							-0.4	5.0	0.0	0.0	1.3			
			Mouth of the Lower Feather River	66	All Years							1.2	0.0	0.0	0.0	0.0			

Table AQ-T-4-3e

White Sturgeon in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative											
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	November through May	Monthly mean water temperatures (°F)	Below the Fish Barrier Dam	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0					
			Below the Thermalito Afterbay Outlet	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0					
			Mouth of the Feather River	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Spawning and Egg Incubation	February through May	Monthly mean water temperatures (°F)	Below the Fish Barrier Dam	61	All Years					0.0	0.0	0.0	0.0					
			Below the Thermalito Afterbay Outlet	61	All Years					0.0	0.0	1.1	-1.3					
			Mouth of the Feather River	61	All Years					0.0	0.0	0.0	0.0					
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Fish Barrier Dam	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Below the Thermalito Afterbay Outlet	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	5.0	0.0	0.0	1.3
			Mouth of the Feather River	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2	0.0	0.0	0.0	0.0

Table AQ-T-4-3f

Pacific Lamprey in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative											
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	50-64	All Years					-1.2	-1.3	-4.0	0.0	0.0	0.0	-0.1	-2.2	
			Below the Thermalito Afterbay Outlet	50-64	All Years				0.0	2.5	-0.1	0.0	1.3	-1.4	0.0	0.0		
			Mouth of the Lower Feather River	50-64	All Years				0.0	-1.3	0.0	-1.3	0.0	0.0	0.0	0.0		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Thermalito Afterbay Outlet	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	1.3	0.0	
			Mouth of the Lower Feather River	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3	2.5	-2.1	0.6	

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-3g

River Lamprey in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative											
			Description	Criteria Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning and Egg Incubation	February through July	Monthly mean water temperatures (deg. F)	Low Flow Channel below the Fish Barrier Dam	50-64	All Years					-1.3	-4.0	0.0	0.0	0.0	-0.1		
			Below the Thermalito Afterbay Outlet	50-64	All Years					2.5	-0.1	0.0	1.3	-1.4	0.0		
			Mouth of the Lower Feather River	50-64	All Years					-1.3	0.0	-1.3	0.0	0.0	0.0		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Thermalito Afterbay Outlet	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	1.3	0.0
			Mouth of the Lower Feather River	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3	2.5	-2.1	0.6

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-3h
Hardhead in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative												
			Description	Criteria Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adults and Juveniles	Year-round	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Below the Thermalito Afterbay Outlet	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.8	0.0	0.0	0.0	0.0	-0.6
			Mouth of the Lower Feather River	65-82	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Adult Spawning	April through June	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	59-64	All Years							0.0	0.0	0.0				
			Below the Thermalito Afterbay Outlet	59-64	All Years							-0.1	1.3	-1.4				
			Mouth of the Lower Feather River	59-64	All Years							-1.3	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-3j

Splittail in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Spawning	February through May	Monthly mean water temperatures (°F)	Mouth of the Feather River	45-75	All Years					0.0	0.0	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-3k

Striped Bass in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	59-68	All Years								-0.1	0.0	-1.3			
			Mouth of the Feather River	59-68	All Years								0.0	-0.6	0.0			
Larvae, Fry, and Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	61-71	All Years	1.2	0.0	0.0	0.0	0.0	0.0	0.0	1.1	-1.3	-0.9	-0.1	-5.0	0.6
			Mouth of the Feather River	61-71	All Years	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	-1.3	2.5	1.8

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-3I

American Shad in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative											
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	60-70	All Years								1.3	-1.2	0.5			
			Mouth of the Feather River	60-70	All Years									0.0	0.0	1.2		
Larvae, Fry, and Juvenile Rearing and Emigration	July through November	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	63-77	All Years	-0.7	0.0									0.0	0.0	0.9
			Mouth of the Feather River	63-77	All Years	1.2	0.0										-1.1	0.0

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-3m

Largemouth Bass in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Spawning	March through June	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	59-75	All Years						0.0	-0.1	0.0	0.0			
			Mouth of the Feather River	59-75	All Years							-0.1	0.0	0.0	-0.7		

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Alternative B Compared to No Action Alternative

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Table AQ-T-4-5a

Spring-run Chinook Salmon in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative													
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	March through October	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	60	All Years	0.3						0.0	0.0	0.0	0.0	0.0	-8.7	0.0		
				64	All Years	0.0						0.0	0.0	0.0	0.0	0.0	-0.6	0.9	0.0	
				68	All Years	0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Thermalito Afterbay Outlet	60	All Years	-1.3						0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	2.5
				64	All Years	0.0						0.0	0.0	-1.3	1.7	0.0	0.0	0.0	0.0	4.2
				68	All Years	0.0						0.0	0.0	0.0	1.3	3.7	-5.9	-1.2		
			Mouth of the Lower Feather River	60	All Years	3.8						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				64	All Years	-1.0						0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				68	All Years	0.0						0.0	0.0	0.6	0.0	0.0	0.0	0.0	-4.2	
Adult Spawning and Embryo Incubation	September through April	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	56	All Years	-2.7	-1.8	0.0	0.0	0.0	0.0	0.0	0.0					-6.3		
				58	All Years	-0.1	-0.3	0.0	0.0	0.0	0.0	0.0	0.0						0.3	
				60	All Years	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0	
			Below the Thermalito Afterbay Outlet	62	All Years	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0	
				56	All Years	0.0	-0.5	0.0	0.0	0.0	-1.1	0.6							0.0	
				58	All Years	2.5	0.0	0.0	0.0	0.0	0.0	-2.5							0.0	
			Mouth of the Lower Feather River	60	All Years	-1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.3						2.5	
				62	All Years	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0						-8.1	
				60	All Years	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-8.7	0.0	
Juvenile Rearing and Emigration	Year-round	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.1	1.9	0.0		
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				60	All Years	-1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	
			Below the Thermalito Afterbay Outlet	63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.9	0.2	0.0	0.0	0.0	0.7	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.8	0.0	0.0	0.0	0.0	-5.6	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	3.7	-5.9	-1.2		
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.2	5.0	0.0		
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0		
				60	All Years	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Smolt Emigration	October through June	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
			Below the Thermalito Afterbay Outlet	60	All Years	-1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0				
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.9	0.2					
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.8	0.0					
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3					
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6					
			Mouth of the Lower Feather River	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
				60	All Years	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
				63	All Years	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
				65	All Years	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0				
70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.5								
75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5								

Table AQ-T-4-5c

Steelhead in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative												
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Immigration and Holding	August through April	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	52	All Years	0.0	1.2	-1.9	0.0	0.0	0.0	1.7	5.0				0.0	0.0	
				56	All Years	-2.7	-1.8	0.0	0.0	0.0	0.0	0.0	0.0					0.0	-6.3
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0
			Below the Thermalito Afterbay Outlet	52	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0
				56	All Years	0.0	-0.5	0.0	0.0	0.0	0.0	-1.1	0.6					0.0	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				5.0	0.0	
			Mouth of the Lower Feather River	52	All Years	0.0	0.0	0.0	0.0	0.0	-0.4	-1.3	0.0					0.0	0.0
				56	All Years	0.0	0.4	0.0	0.0	0.0	0.0	-1.3	0.0					0.0	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				-1.3	-3.5	
Adult Spawning and Embryo Incubation	December through May	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	52	All Years			-1.9	0.0	0.0	1.7	5.0	0.0						
				54	All Years			0.0	0.0	0.0	-0.4	0.0	0.0						
				57	All Years			0.0	0.0	0.0	0.0	0.0	0.0	1.2					
			Below the Thermalito Afterbay Outlet	60	All Years			0.0	0.0	0.0	0.0	0.0	0.0	0.0					
				52	All Years			0.0	0.0	0.0	0.0	0.0	0.0	0.0					
				54	All Years			0.0	0.0	0.0	0.0	-1.2	0.0	0.0					
				57	All Years			0.0	0.0	0.0	0.0	-3.3	-1.2	0.0					
				60	All Years			0.0	0.0	0.0	0.0	0.0	1.3	0.0					
Juvenile Rearing and Emigration	Year-round	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.1	1.9	0.0	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Below the Thermalito Afterbay Outlet	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.9	0.2	0.0	0.0	0.0	0.7
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.8	0.0	0.0	0.0	0.0	-5.6
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	3.7	-5.9	-1.2	
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0		
Smolt Emigration	October through May	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	52	All Years	0.0	1.2	-1.9	0.0	0.0	1.7	5.0	0.0						
				55	All Years	0.0	-3.2	0.0	0.0	0.0	-0.4	0.0	0.5						
				59	All Years	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
			Below the Thermalito Afterbay Outlet	52	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
				55	All Years	0.0	-3.7	0.0	0.0	0.0	0.0	0.0	0.0						
				59	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0					
			Mouth of the Lower Feather River	52	All Years	0.0	0.0	0.0	0.0	0.0	-0.4	-1.3	0.0	0.0					
				55	All Years	0.0	0.0	0.0	0.0	0.0	0.0	-2.5	0.0	0.0					
				59	All Years	0.8	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0					

Table AQ-T-4-5d

Green Sturgeon in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative													
			Description	Criteria Value	Range	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Immigration and Holding	February through December	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	61	All Years	-0.6	0.0	0.0		0.0	0.0	0.0	0.0	0.0	5.0	-10.6	0.0	
				64	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	-0.6	0.9	0.0
				68	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Thermalito Afterbay Outlet	61	All Years	1.7	0.0	0.0		0.0	0.0	1.0	-2.5	0.0	0.0	0.0	0.0	1.9
				64	All Years	0.0	0.0	0.0		0.0	0.0	0.0	-1.3	1.7	0.0	0.0	0.0	4.2
				68	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	1.3	3.7	-5.9	-1.2	
			Mouth of the Lower Feather River	61	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				64	All Years	-1.0	0.0	0.0		0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
				68	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	-4.2
Adult Spawning and Embryo Incubation	March through August	Monthly Mean Water Temperatures (°F)	Below the Thermalito Afterbay Outlet	64	All Years					0.0	0.0	-1.3	1.7	0.0	0.0	4.2		
				68	All Years					0.0	0.0	0.0	1.3	3.7	-5.9			
Juvenile Rearing	Year-round	Monthly Mean Water Temperatures (°F)	Below the Thermalito Afterbay Outlet	64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	-1.3	1.7	0.0	0.0	4.2		
				66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.3	4.6	0.0	-1.3	0.3		
			Mouth of the Lower Feather River	64	All Years	-1.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	
				66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.2	0.0	0.0	0.0	2.5	
Juvenile Emigration	May through September	Monthly Mean Water Temperatures (°F)	Below the Thermalito Afterbay Outlet	66	All Years							0.3	4.6	0.0	-1.3	0.3		
			Mouth of the Lower Feather River	66	All Years							1.2	0.0	0.0	0.0	2.5		

Table AQ-T-4-5e

White Sturgeon in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative										
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Adult Immigration and Holding	November through May	Monthly mean water temperatures (°F)	Below the Fish Barrier Dam	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
			Below the Thermalito Afterbay Outlet	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
			Mouth of the Feather River	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Spawning and Egg Incubation	February through May	Monthly mean water temperatures (°F)	Below the Fish Barrier Dam	61	All Years					0.0	0.0	0.0	0.0				
			Below the Thermalito Afterbay Outlet	61	All Years					0.0	0.0	1.0	-2.5				
			Mouth of the Feather River	61	All Years					0.0	0.0	0.0	0.0				
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Fish Barrier Dam	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Thermalito Afterbay Outlet	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	4.6	0.0	-1.3	0.3
			Mouth of the Feather River	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.2	0.0	0.0	0.0	2.5

Table AQ-T-4-5f
Pacific Lamprey in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative											
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	50-64	All Years					-1.8	0.0	-2.8	0.0	0.0	0.0	0.6	-0.9	
			Below the Thermalito Afterbay Outlet	50-64	All Years				0.0	1.3	-0.4	0.0	1.3	-1.7	0.0	0.0		
			Mouth of the Lower Feather River	50-64	All Years				0.0	-1.3	0.0	-1.3	0.0	0.0	0.0	0.0		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Thermalito Afterbay Outlet	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Mouth of the Lower Feather River	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.5	1.3	-4.6	0.6	

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-5g
River Lamprey in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	February through July	Monthly mean water temperatures (deg. F)	Low Flow Channel below the Fish Barrier Dam	50-64	All Years					0.0	-2.8	0.0	0.0	0.0	0.6			
			Below the Thermalito Afterbay Outlet	50-64	All Years					1.3	-0.4	0.0	1.3	-1.7	0.0			
			Mouth of the Lower Feather River	50-64	All Years					-1.3	0.0	-1.3	0.0	0.0	0.0			
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Below the Thermalito Afterbay Outlet	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Mouth of the Lower Feather River	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.5	1.3	-4.6	0.6	

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-5h
Hardhead in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative											
			Description	Criteria Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adults and Juveniles	Year-round	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Thermalito Afterbay Outlet	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.8	0.0	0.0	0.0	-5.6
			Mouth of the Lower Feather River	65-82	All Years	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Adult Spawning	April through June	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	59-64	All Years							0.0	0.0	0.0			
			Below the Thermalito Afterbay Outlet	59-64	All Years							-0.1	1.3	-1.7			
			Mouth of the Lower Feather River	59-64	All Years							-1.3	0.0	0.0			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-5j

Spittail in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative											
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Spawning	February through May	Monthly mean water temperatures (°F)	Mouth of the Feather River	45-75	All Years						0.0	0.0	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-5k

Striped Bass in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	59-68	All Years								-0.1	0.0	-1.3			
			Mouth of the Feather River	59-68	All Years								0.0	-0.6	0.0			
Larvae, Fry, and Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	61-71	All Years	1.7	0.0	0.0	0.0	0.0	0.0	1.0	-2.5	-0.9	-0.8	-5.0	1.9	
			Mouth of the Feather River	61-71	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.7	-1.9	1.3	4.2	

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-5I

American Shad in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative											
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	60-70	All Years								1.3	0.0	-0.6			
			Mouth of the Feather River	60-70	All Years								0.0	0.0	2.5			
Larvae, Fry, and Juvenile Rearing and Emigration	July through November	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	63-77	All Years	0.0	0.0								0.0	0.0	0.7	
			Mouth of the Feather River	63-77	All Years	0.6	0.0								-1.1	0.0	-0.6	

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-5m

Largemouth Bass in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Spawning	March through June	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	59-75	All Years						0.0	-0.1	0.0	0.0			
			Mouth of the Feather River	59-75	All Years							-0.1	0.0	0.0	-0.5		

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Alternative C Compared to No Action Alternative

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Table AQ-T-4-7b

Fall-run Chinook Salmon in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative													
						Description	Value	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	July through December	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	60	All Years	-0.6	0.0	0.0								0.0	-6.2	0.0	
				64	All Years	0.0	0.0	0.0								-0.6	2.8	0.0	
				68	All Years	0.0	0.0	0.0								0.0	0.0	0.0	
			Below the Thermalito Afterbay Outlet	60	All Years	-0.6	0.0	0.0									0.0	0.0	2.5
				64	All Years	0.0	0.0	0.0									0.0	0.0	2.9
				68	All Years	0.0	0.0	0.0								2.5	-8.0	-1.2	
			Mouth of the Lower Feather River	60	All Years	4.4	0.0	0.0									0.0	0.0	0.0
				64	All Years	-0.1	0.0	0.0									0.0	0.0	0.0
				68	All Years	0.0	0.0	0.0									0.0	0.0	-4.4
Adult Spawning	October through December	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	56	All Years	-0.3	-1.0	0.0											
				58	All Years	-1.0	0.3	0.0											
				60	All Years	-0.6	0.0	0.0											
			Below the Thermalito Afterbay Outlet	62	All Years	-0.3	0.0	0.0											
				56	All Years	-1.0	0.5	0.0											
				58	All Years	3.7	0.0	0.0											
			Mouth of the Lower Feather River	60	All Years	-0.6	0.0	0.0											
				62	All Years	-0.2	0.0	0.0											
				60	All Years	-0.3	-1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Embryo Incubation	October through April	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	58	All Years	-1.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0						
				60	All Years	-0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
				62	All Years	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
			Below the Thermalito Afterbay Outlet	56	All Years	-1.0	0.5	0.0	0.0	0.0	0.0	-1.0	0.6						
				58	All Years	3.7	0.0	0.0	0.0	0.0	0.0	0.0	-2.5						
				60	All Years	-0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
			Mouth of the Lower Feather River	62	All Years	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
				60	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
				63	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Juvenile Rearing and Emigration	November through June	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	65	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				68	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				70	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				75	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				60	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
			Below the Thermalito Afterbay Outlet	63	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.9	0.1			
				65	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.8	0.0			
				68	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3			
				70	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5			
				75	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
			Mouth of the Lower Feather River	60	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				63	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				65	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
				68	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	-0.2			
				70	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.5			
75	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.7							

Table AQ-T-4-7c

Steelhead in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative														
			Description	Criteria Value	Range	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	August through April	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	52	All Years	0.0	1.2	-0.6	0.0	0.0	0.0	1.7	5.0				0.0	0.0	
				56	All Years	-0.3	-1.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	-6.7
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0
			Below the Thermalito Afterbay Outlet	52	All Years	0.0	0.0	0.0	0.0	0.0	-0.1	-1.7	0.0					0.0	0.0
				56	All Years	-1.0	0.5	0.0	0.0	0.0	0.0	-1.0	0.6					0.0	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				6.3	0.0	
			Mouth of the Lower Feather River	52	All Years	0.0	0.0	0.0	0.0	0.0	-0.4	0.0	0.0					0.0	0.0
				56	All Years	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	-3.1	
Adult Spawning and Embryo Incubation	December through May	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	52	All Years			-0.6	0.0	0.0	1.7	5.0	0.0						
				54	All Years			0.0	0.0	0.0	0.8	-0.2	0.0						
				57	All Years			0.0	0.0	0.0	0.0	0.0	0.0	1.2					
			Below the Thermalito Afterbay Outlet	60	All Years			0.0	0.0	0.0	0.0	0.0	0.0	0.0					
				52	All Years			0.0	0.0	-0.1	-1.7	0.0	0.0						
				54	All Years			0.0	0.0	0.0	-1.2	0.0	0.0						
			Mouth of the Lower Feather River	57	All Years			0.0	0.0	0.0	-2.1	-1.2	0.0						
				60	All Years			0.0	0.0	0.0	0.0	0.0	0.0						
				63	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	4.6	0.0	
Juvenile Rearing and Emigration	Year-round	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Below the Thermalito Afterbay Outlet	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				63	All Years	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.9	0.1	0.0	0.0	-0.9	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.8	0.0	0.0	0.0	-2.5	
			Mouth of the Lower Feather River	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.5	-8.0	-1.2	
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	-1.2	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	
Smolt Emigration	October through May	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	52	All Years	0.0	1.2	-0.6	0.0	0.0	1.7	5.0	0.0						
				55	All Years	1.2	-2.3	0.0	0.0	0.0	0.2	0.0	0.5						
				59	All Years	-0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
			Below the Thermalito Afterbay Outlet	52	All Years	0.0	0.0	0.0	0.0	-0.1	-1.7	0.0	0.0						
				55	All Years	0.0	-2.5	0.0	0.0	0.0	1.3	0.0	0.0						
				59	All Years	0.7	0.0	0.0	0.0	0.0	0.0	-0.1	0.0						
			Mouth of the Lower Feather River	52	All Years	0.0	0.0	0.0	0.0	-0.4	0.0	0.0	0.0						
				55	All Years	0.0	1.3	0.0	0.0	0.0	-3.1	0.0	0.0						
				59	All Years	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0						

Table AQ-T-4-7d

Green Sturgeon in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative													
			Description	Criteria Value	Range	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Immigration and Holding	February through December	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	61	All Years	-0.6	0.0	0.0		0.0	0.0	0.0	0.0	0.0	2.5	-8.1	0.0	
				64	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	-0.6	2.8	0.0
				68	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Thermalito Afterbay Outlet	61	All Years	1.2	0.0	0.0		0.0	0.0	1.1	-2.5	0.0	0.0	0.0	0.0	0.6
				64	All Years	0.0	0.0	0.0		0.0	0.0	0.0	-1.3	1.4	0.0	0.0	2.9	
				68	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	1.3	2.5	-8.0	-1.2	
			Mouth of the Lower Feather River	61	All Years	2.5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				64	All Years	-0.1	0.0	0.0		0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	
				68	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.6	-0.2	0.0	0.0	-4.4	
Adult Spawning and Embryo Incubation	March through August	Monthly Mean Water Temperatures (°F)	Below the Thermalito Afterbay Outlet	64	All Years					0.0	0.0	-1.3	1.4	0.0	0.0	2.9		
				68	All Years					0.0	0.0	0.0	1.3	2.5	-8.0			
Juvenile Rearing	Year-round	Monthly Mean Water Temperatures (°F)	Below the Thermalito Afterbay Outlet	64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	-1.3	1.4	0.0	0.0	2.9		
				66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	4.6	0.0	1.9	-1.2		
			Mouth of the Lower Feather River	64	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0		
				66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.2	0.0	0.0	1.2		
Juvenile Emigration	May through September	Monthly Mean Water Temperatures (°F)	Below the Thermalito Afterbay Outlet	66	All Years							-0.4	4.6	0.0	1.9	-1.2		
			Mouth of the Lower Feather River	66	All Years							1.2	0.0	0.0	0.0	1.2		

Table AQ-T-4-7e

White Sturgeon in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative											
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	November through May	Monthly mean water temperatures (°F)	Below the Fish Barrier Dam	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0					
			Below the Thermalito Afterbay Outlet	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0					
			Mouth of the Feather River	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Spawning and Egg Incubation	February through May	Monthly mean water temperatures (°F)	Below the Fish Barrier Dam	61	All Years					0.0	0.0	0.0	0.0					
			Below the Thermalito Afterbay Outlet	61	All Years					0.0	0.0	1.1	-2.5					
			Mouth of the Feather River	61	All Years					0.0	0.0	0.0	0.0					
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Fish Barrier Dam	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Below the Thermalito Afterbay Outlet	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	4.6	0.0	1.9	-1.2
			Mouth of the Feather River	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.2	0.0	0.0	0.0	1.2

Table AQ-T-4-7f

Pacific Lamprey in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative											
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	50-64	All Years					-1.2	-2.5	-3.7	0.0	0.0	0.0	0.6	-2.8	
			Below the Thermalito Afterbay Outlet	50-64	All Years				0.0	1.3	-0.4	0.0	1.3	-1.4	0.0	0.0		
			Mouth of the Lower Feather River	50-64	All Years				0.0	-1.3	0.0	-1.3	0.0	0.0	0.0	0.0		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Thermalito Afterbay Outlet	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	-1.2	0.0	
			Mouth of the Lower Feather River	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3	1.3	-3.3	-0.6	

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-7g
River Lamprey in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	February through July	Monthly mean water temperatures (deg. F)	Low Flow Channel below the Fish Barrier Dam	50-64	All Years						-2.5	-3.7	0.0	0.0	0.0	0.6		
			Below the Thermalito Afterbay Outlet	50-64	All Years					1.3	-0.4	0.0	1.3	-1.4	0.0			
			Mouth of the Lower Feather River	50-64	All Years					-1.3	0.0	-1.3	0.0	0.0	0.0			
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Thermalito Afterbay Outlet	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	-1.2	0.0	
			Mouth of the Lower Feather River	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3	1.3	-3.3	-0.6	

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-7h
Hardhead in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative													
			Description	Criteria Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adults and Juveniles	Year-round	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Below the Thermalito Afterbay Outlet	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.8	0.0	0.0	0.0	0.0	-2.5	
			Mouth of the Lower Feather River	65-82	All Years	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	
Adult Spawning	April through June	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	59-64	All Years							0.0	0.0	0.0					
			Below the Thermalito Afterbay Outlet	59-64	All Years								-0.1	1.3	-1.4				
			Mouth of the Lower Feather River	59-64	All Years								-1.3	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-7j

Splittail in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative											
			Description	Criteria Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Spawning	February through May	Monthly mean water temperatures (°F)	Mouth of the Feather River	45-75	All Years					0.0	0.0	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-7k

Striped Bass in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	59-68	All Years								-0.1	0.0	-1.3			
			Mouth of the Feather River	59-68	All Years								0.0	-0.6	0.2			
Larvae, Fry, and Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	61-71	All Years	1.2	0.0	0.0	0.0	0.0	0.0	1.1	-2.5	-0.9	-0.8	-6.2	0.6	
			Mouth of the Feather River	61-71	All Years	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	-1.3	2.5	4.1	

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-71

American Shad in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative										
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	60-70	All Years							0.0	0.0	0.5			
			Mouth of the Feather River	60-70	All Years								0.0	0.0	2.5		
Larvae, Fry, and Juvenile Rearing and Emigration	July through November	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	63-77	All Years	0.5	0.0								0.0	0.0	-0.9
			Mouth of the Feather River	63-77	All Years	-0.6	0.0								-0.7	1.2	-0.6

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-7m

Largemouth Bass in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Spawning	March through June	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	59-75	All Years						0.0	-0.1	0.0	0.0			
			Mouth of the Feather River	59-75	All Years						0.0	0.0	0.0	-0.7			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Alternative D Compared to No Action Alternative

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Table AQ-T-4-9a

Spring-run Chinook Salmon in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative													
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	March through October	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	60	All Years	-0.1						0.0	0.0	0.0	0.0	-1.0	-5.0	2.3		
				64	All Years	0.0							0.0	0.0	0.0	0.0	-0.6	0.4	0.0	
				68	All Years	0.0							0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Below the Thermalito Afterbay Outlet	60	All Years	-1.3							0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.7
				64	All Years	0.4							0.0	0.0	-1.3	1.7	0.0	0.0	0.0	7.9
				68	All Years	0.0							0.0	0.0	0.0	2.5	6.2	-5.5	-0.7	
			Mouth of the Lower Feather River	60	All Years	2.5							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				64	All Years	0.0							0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
				68	All Years	0.0							0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.8
Adult Spawning and Embryo Incubation	September through April	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	56	All Years	-2.7	-2.0	0.0	0.0	0.0	0.0	0.0	0.0						-6.3	
				58	All Years	-0.8	-0.5	0.0	0.0	0.0	0.0	0.0	0.0							1.6
				60	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0							2.3
			Below the Thermalito Afterbay Outlet	62	All Years	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0							0.9
				56	All Years	-0.4	-0.3	0.0	0.0	0.0	0.0	0.3	0.6							0.0
				58	All Years	3.7	0.2	0.0	0.0	0.0	0.0	0.0	-1.2							0.0
			Mouth of the Lower Feather River	60	All Years	-1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.3							1.7
				62	All Years	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0							-7.5
				62	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-5.0	2.3	
Juvenile Rearing and Emigration	Year-round	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	63	All Years	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				60	All Years	-1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.7
			Below the Thermalito Afterbay Outlet	63	All Years	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	0.2	0.0	0.0	0.0	1.0	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.8	0.0	0.0	0.0	0.0	6.2	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	6.2	-5.5	-0.7		
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	1.5	5.0	0.0		
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.1	0.0	
				60	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Smolt Emigration	October through June	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	63	All Years	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Below the Thermalito Afterbay Outlet	60	All Years	-1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	
				63	All Years	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	0.2	0.0	0.0	0.0	0.0	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.8	0.0	0.0	0.0	0.0	0.0	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	0.0	0.0	0.0	
			Mouth of the Lower Feather River	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				60	All Years	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				63	All Years	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.2	0.0	0.0					
75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	0.0	0.0					

Table AQ-T-4-9c

Steelhead in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative												
			Description				Value	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	August through April	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	52	All Years	0.0	0.0	-1.9	0.0	0.0	0.0	1.4	3.8				0.0	0.0	
				56	All Years	-2.7	-2.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	-6.3
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0
			Below the Thermalito Afterbay Outlet	52	All Years	0.0	0.0	0.0	0.0	-0.1	-0.4	0.0						0.0	0.0
				56	All Years	-0.4	-0.3	0.0	0.0	0.0	0.3	0.6						0.0	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0					5.0	0.0	
			Mouth of the Lower Feather River	52	All Years	0.0	0.0	0.0	0.0	-1.0	0.0	0.0						0.0	0.0
				56	All Years	0.0	0.4	0.0	0.0	0.0	0.0	0.0						0.0	0.0
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0					1.2	-1.9	
Adult Spawning and Embryo Incubation	December through May	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	52	All Years			-1.9	0.0	0.0	1.4	3.8	0.0						
				54	All Years			0.0	0.0	0.0	0.8	0.0	0.0						
				57	All Years			0.0	0.0	0.0	0.0	0.0	0.0						
			Below the Thermalito Afterbay Outlet	60	All Years			0.0	0.0	0.0	0.0	0.0	0.0	0.0					
				52	All Years			0.0	0.0	-0.1	-0.4	0.0	0.0						
				54	All Years			0.0	0.0	0.0	-1.2	0.0	0.0						
			Mouth of the Lower Feather River	57	All Years			0.0	0.0	0.0	0.0	-2.1	1.3	0.0					
				60	All Years			0.0	0.0	0.0	0.0	0.0	1.3	0.0					
				63	All Years	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.7	-0.7	0.0	
Juvenile Rearing and Emigration	Year-round	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Below the Thermalito Afterbay Outlet	75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				63	All Years	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	0.2	0.0	0.0	1.0	
				65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.8	0.0	0.0	0.0	6.2	
			Mouth of the Lower Feather River	68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	6.2	-5.5	-0.7	
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.4	0.0	0.0	
				75	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.1	0.0	
Smolt Emigration	October through May	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	52	All Years	0.0	0.0	-1.9	0.0	0.0	1.4	3.8	0.0						
				55	All Years	1.7	-2.5	0.0	0.0	0.0	0.3	0.0	0.5						
				59	All Years	-0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0						
			Below the Thermalito Afterbay Outlet	52	All Years	0.0	0.0	0.0	0.0	-0.1	-0.4	0.0	0.0						
				55	All Years	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0						
				59	All Years	2.5	0.0	0.0	0.0	0.0	0.0	0.2	0.0						
			Mouth of the Lower Feather River	52	All Years	0.0	0.0	0.0	0.0	-1.0	0.0	0.0	0.0						
				55	All Years	0.0	0.0	0.0	0.0	0.0	-1.2	0.0	0.0						
				59	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						

Table AQ-T-4-9d

Green Sturgeon in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative												
			Description				Value	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	February through December	Monthly Mean Water Temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	61	All Years	0.1	0.0	0.0		0.0	0.0	0.0	0.0	0.0	5.0	-8.1	1.7		
				64	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	-0.6	0.4	0.0	
				68	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
			Below the Thermalito Afterbay Outlet	61	All Years	2.1	0.0	0.0		0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	-2.5
				64	All Years	0.4	0.0	0.0		0.0	0.0	0.0	-1.3	1.7	0.0	0.0	7.9		
				68	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	2.5	6.2	-5.5	-0.7		
			Mouth of the Lower Feather River	61	All Years	1.2	0.0	0.0		0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0		
				64	All Years	0.0	0.0	0.0		0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0		
				68	All Years	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.8	
Adult Spawning and Embryo Incubation	March through August	Monthly Mean Water Temperatures (°F)	Below the Thermalito Afterbay Outlet	64	All Years					0.0	0.0	-1.3	1.7	0.0	0.0	7.9			
				68	All Years					0.0	0.0	0.0	2.5	6.2	-5.5				
Juvenile Rearing	Year-round	Monthly Mean Water Temperatures (°F)	Below the Thermalito Afterbay Outlet	64	All Years	0.4	0.0	0.0	0.0	0.0	0.0	-1.3	1.7	0.0	0.0	7.9			
				66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.3	4.6	0.0	-0.6	0.5			
			Mouth of the Lower Feather River	64	All Years	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0		
				66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	1.2		
Juvenile Emigration	May through September	Monthly Mean Water Temperatures (°F)	Below the Thermalito Afterbay Outlet	66	All Years							0.3	4.6	0.0	-0.6	0.5			
			Mouth of the Lower Feather River	66	All Years							0.0	0.0	0.0	0.0	1.2			

Table AQ-T-4-9e

White Sturgeon in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative										
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Adult Immigration and Holding	November through May	Monthly mean water temperatures (°F)	Below the Fish Barrier Dam	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
			Below the Thermalito Afterbay Outlet	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
			Mouth of the Feather River	77	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Spawning and Egg Incubation	February through May	Monthly mean water temperatures (°F)	Below the Fish Barrier Dam	61	All Years					0.0	0.0	0.0	0.0				
			Below the Thermalito Afterbay Outlet	61	All Years					0.0	0.0	1.9	0.0				
			Mouth of the Feather River	61	All Years					0.0	0.0	0.0	0.4				
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Fish Barrier Dam	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Thermalito Afterbay Outlet	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	4.6	0.0	-0.6	0.5
			Mouth of the Feather River	66	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0

Table AQ-T-4-9f
Pacific Lamprey in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative										
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	50-64	All Years				0.7	1.2	-2.8	0.0	0.0	0.0	0.6	-0.4	
			Below the Thermalito Afterbay Outlet	50-64	All Years				0.0	1.3	0.0	0.0	1.3	-1.7	0.0	0.0	
			Mouth of the Lower Feather River	50-64	All Years				0.0	-1.3	0.0	-1.3	0.0	0.0	0.0	0.0	
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Thermalito Afterbay Outlet	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.4	0.0	0.0
			Mouth of the Lower Feather River	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	5.0	1.3	-2.1	-0.6

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-9g
River Lamprey in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative											
			Description	Criteria Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning and Egg Incubation	February through July	Monthly mean water temperatures (deg. F)	Low Flow Channel below the Fish Barrier Dam	50-64	All Years					1.2	-2.8	0.0	0.0	0.0	0.6		
			Below the Thermalito Afterbay Outlet	50-64	All Years					1.3	0.0	0.0	1.3	-1.7	0.0		
			Mouth of the Lower Feather River	50-64	All Years					-1.3	0.0	-1.3	0.0	0.0	0.0		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Thermalito Afterbay Outlet	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.4	0.0	0.0
			Mouth of the Lower Feather River	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	5.0	1.3	-2.1	-0.6

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-9h
Hardhead in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative											
			Description	Criteria Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adults and Juveniles	Year-round	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Below the Thermalito Afterbay Outlet	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.8	0.0	0.0	0.0	6.2
			Mouth of the Lower Feather River	65-82	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.4
Adult Spawning	April through June	Monthly mean water temperatures (°F)	Low Flow Channel below the Fish Barrier Dam	59-64	All Years							0.0	0.0	1.3			
			Below the Thermalito Afterbay Outlet	59-64	All Years							0.2	1.3	-1.7			
			Mouth of the Lower Feather River	59-64	All Years							-1.3	0.0	0.0			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-9j

Splittail in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative											
			Description	Criteria Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Spawning	February through May	Monthly mean water temperatures (°F)	Mouth of the Feather River	45-75	All Years					0.0	0.0	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-9k

Striped Bass in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	59-68	All Years							0.2	0.0	-2.5			
			Mouth of the Feather River	59-68	All Years							0.0	0.0	0.0			
Larvae, Fry, and Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	61-71	All Years	2.1	0.0	0.0	0.0	0.0	0.0	1.9	0.0	-0.9	1.8	-7.5	-2.5
			Mouth of the Feather River	61-71	All Years	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	-1.3	-1.3	2.5	-1.3

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-9I

American Shad in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative											
			Description	Value			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	60-70	All Years								1.3	0.0	0.2			
			Mouth of the Feather River	60-70	All Years									0.0	0.0	1.2		
Larvae, Fry, and Juvenile Rearing and Emigration	July through November	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	63-77	All Years	-0.2	0.0									0.0	0.0	1.0
			Mouth of the Feather River	63-77	All Years	1.2	0.0										0.1	1.2

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-4-9m

Largemouth Bass in the Lower Feather River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Spawning	March through June	Monthly mean water temperatures (°F)	Below the Thermalito Afterbay Outlet	59-75	All Years						0.0	0.2	0.0	0.0			
			Mouth of the Feather River	59-75	All Years						0.0	0.0	0.0	0.6			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Appendix 12E
Fisheries Water Temperature
Assessment Summary Tables
American River

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Alternative A Compared to No Action Alternative

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Table AQ-T-5-3a

Spring-run Chinook Salmon in the Lower American River

Lifestage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative												
			Description				Value (°F)	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Non-Natal Juvenile Rearing	November through April	Monthly Mean Water Temperatures (°F)	Mouth of the American River	60	All Years		0.0	0.0	0.0	0.0	0.0	0.0	2.0						
				63	All Years		0.0	0.0	0.0	0.0	0.0	0.0	-0.5						
				65	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.2						
				68	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0						
				70	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0						
				75	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0						

Table AQ-T-5-3b

Fall-run Chinook Salmon in the Lower American River

Lifestage	Evaluation Period	Impact Indicator	Location		Criteria Value (°F)	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative													
			Description				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	September through December	Monthly Mean Water Temperatures (°F)	American River at Watt Avenue	60	All Years	-12.6	0.0	0.0										0.0		
				64	All Years	-1.8	0.0	0.0											0.9	
				68	All Years	0.0	0.0	0.0												-0.1
			Mouth of the American River	60	All Years	-1.5	0.0	0.0												0.0
				64	All Years	-0.9	0.0	0.0												-0.4
				68	All Years	0.0	0.0	0.0												2.2
Adult Spawning	October through December	Monthly Mean Water Temperatures (°F)	American River at Watt Avenue	56	All Years	0.0	-12.1	0.0												
				58	All Years	-1.7	-0.5	0.0												
				60	All Years	-12.6	0.0	0.0												
				62	All Years	-10.4	0.0	0.0												
Embryo Incubation	October through March	Monthly Mean Water Temperatures (°F)	American River at Watt Avenue	56	All Years	0.0	-12.1	0.0	0.0	0.0	1.4									
				58	All Years	-1.7	-0.5	0.0	0.0	0.0	2.2									
				60	All Years	-12.6	0.0	0.0	0.0	0.0	0.0									
				62	All Years	-10.4	0.0	0.0	0.0	0.0	0.0									
Juvenile Rearing and Emigration	January through June	Monthly Mean Water Temperatures (°F)	American River at Nimbus Dam	60	All Years				0.0	0.0	0.0	0.3	-0.9	-0.7						
				63	All Years				0.0	0.0	0.0	0.0	-0.8	-0.9						
				65	All Years				0.0	0.0	0.0	0.0	-1.5	-0.3						
				68	All Years				0.0	0.0	0.0	0.0	0.0	0.0	1.2					
				70	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0					
				75	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0					
			American River at Watt Avenue	60	All Years				0.0	0.0	0.0	0.0	0.0	2.6	1.1	9.2				
				63	All Years				0.0	0.0	0.0	0.0	0.0	0.5	0.7	1.1				
				65	All Years				0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.8				
				68	All Years				0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.4				
				70	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2				
				75	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
			Mouth of the American River	60	All Years				0.0	0.0	0.0	0.0	0.0	2.0	1.3	-0.1				
				63	All Years				0.0	0.0	0.0	0.0	0.0	-0.5	0.0	2.1				
				65	All Years				0.0	0.0	0.0	0.0	0.0	0.2	-2.0	-1.4				
				68	All Years				0.0	0.0	0.0	0.0	0.0	0.0	-0.6	-0.3				
70	All Years					0.0	0.0	0.0	0.0	0.0	0.0	-0.9	-0.5							
75	All Years					0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2							

Table AQ-T-5-3c

Steelhead in the Lower American River

Lifestage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative											
			Description	Value (°F)			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	November through April	Monthly mean water temperatures (°F)	American River at Watt Avenue	52	All Years		0.0	-2.9	0.0	1.9	5.4	-2.2						
				56	All Years		-12.1	0.0	0.0	0.0	1.4	1.5						
				70	All Years		0.0	0.0	0.0	0.0	0.0	0.0						
			Mouth of the American River	52	All Years		0.0	0.7	0.0	1.3	-0.6	0.0						
				56	All Years		-3.7	0.0	0.0	0.0	0.2	1.5						
				70	All Years		0.0	0.0	0.0	0.0	0.0	0.0						
Adult Spawning	January through April	Monthly mean water temperatures (°F)	American River at Watt Avenue	52	All Years				0.0	1.9	5.4	-2.2						
				54	All Years				0.0	0.0	4.4	-0.7						
				57	All Years				0.0	0.0	2.1	2.0						
				60	All Years				0.0	0.0	0.0	2.6						
Embryo Incubation	January through May	Monthly mean water temperatures (°F)	American River at Watt Avenue	52	All Years				0.0	1.9	5.4	-2.2	-0.1					
				54	All Years				0.0	0.0	4.4	-0.7	0.2					
				57	All Years				0.0	0.0	2.1	2.0	4.9					
				60	All Years				0.0	0.0	0.0	2.6	1.1					
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	American River at Nimbus Dam	65	All Years		-1.2	0.0	0.0	0.0	0.0	0.0	-1.5	-0.3	1.3	-0.8	-0.8	
				68	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.5	-1.9	0.8	
				72	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	-1.1	-0.7	
			American River at Watt Avenue	65	All Years		-3.7	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.8	-2.8	-3.1	-2.1
				68	All Years		0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.4	1.8	0.9	-0.1	
				72	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.8	-1.0	-1.5	
			Mouth of the American River	75	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	-0.1	-1.4
				65	All Years		1.2	0.0	0.0	0.0	0.0	0.0	0.2	-2.0	-1.4	3.9	2.1	-0.8
				68	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	-0.3	0.1	-2.8	2.2
				72	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-1.6	-2.4	-0.9	
				All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	1.1	-1.1	-0.5	
					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Smolt Emigration	January through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	52	All Years				0.0	1.9	5.4	-2.2	-0.1	0.0				
				55	All Years				0.0	0.0	2.3	2.3	1.5	0.0				
			Mouth of the American River	52	All Years				0.0	1.3	-0.6	0.0	0.0	0.0				
				55	All Years				0.0	0.0	4.7	-1.3	-0.1	0.0				

Table AQ-T-5-3d

Green Sturgeon in the Lower American River

Lifestage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative											
			Description	Value (°F)		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	February through December	Monthly mean water temperatures (°F)	Mouth of the American River	61	All Years	-9.8	0.0	0.0		0.0	0.0	-0.2	0.1	1.0	0.0	0.0	0.0
Adult Spawning and Egg Incubation	March through August	Monthly mean water temperatures (°F)	Mouth of the American River	68	All Years						0.0	0.0	-0.6	-0.3	0.1	-2.8	
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Mouth of the American River	66	All Years	-1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	-1.0	4.8	-3.4	6.4

Table AQ-T-5-3e

Pacific Lamprey in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location		Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative											
			Description	Criteria Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Nimbus Dam Release	50-64	All Years				0.3	1.9	1.5	-0.2	0.9	0.7	-1.9	0.7	
			American River at Watt Avenue	50-64	All Years				-1.4	2.0	-0.7	-0.7	-1.8	-2.0	-8.8	1.3	
			Mouth of the American River	50-64	All Years				0.2	-1.1	0.0	0.5	-0.3	0.0	-0.1	0.0	
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Nimbus Dam Release	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	-1.1	-0.7
			American River at Watt Avenue	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.8	-1.0	-1.5
			Mouth of the American River	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-1.6	-2.4	-0.9

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-3f

River Lamprey in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	February through July	Monthly mean water temperatures (°F)	Nimbus Dam Release	50-64	All Years						1.9	1.5	-0.2	0.9	0.7	-1.9		
			American River at Watt Avenue	50-64	All Years						2.0	-0.7	-0.7	-1.8	-2.0	-8.8		
			Mouth of the American River	50-64	All Years						-1.1	0.0	0.5	-0.3	0.0	-0.1		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Nimbus Dam Release	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	-1.1	-0.7
			American River at Watt Avenue	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.8	-1.0	-1.5
			Mouth of the American River	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-1.6	-2.4	-0.9

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-3g

Hardhead in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adults and Other Lifestages	Year-round	Monthly mean water temperatures (°F)	American River at Watt Avenue	65-82	All Years	-3.7	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.8	-2.8	-3.0	-2.1
Adult Spawning	April through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	59-64	All Years							2.4	-3.6	-0.2			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-3i

Splittail in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Spawning	February through May	Monthly mean water temperatures (°F)	Mouth of the American River	45-75	All Years						0.0	0.0	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-3j

Striped Bass in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	59-68	All Years							3.1	-1.7	2.2			
			Mouth of the American River	59-68	All Years							4.2	4.0	0.2			
Larvae, Fry, and Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	American River at Watt Avenue	61-71	All Years	-12.8	0.0	0.0	0.0	0.0	0.0	1.0	-1.7	6.3	0.6	2.1	1.5
			Mouth of the American River	61-71	All Years	-9.8	0.0	0.0	0.0	0.0	0.0	-0.2	1.6	1.3	2.1	0.3	0.0

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-3k

American Shad in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	60-70	All Years							2.6	1.1	9.4			
			Mouth of the American River	60-70	All Years							2.0	2.2	0.4			
Larvae, Fry, and Juvenile Rearing and Emigration	July through November	Monthly mean water temperatures (°F)	American River at Watt Avenue	63-77	All Years	-2.0	0.0								2.9	2.8	-1.9
			Mouth of the American River	63-77	All Years	-10.1	0.0								-0.4	0.8	0.0

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-3I

Largemouth Bass in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative A relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Spawning	March through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	59-75	All Years						0.0	3.1	-1.8	1.8			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

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Alternative B Compared to No Action Alternative

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Table AQ-T-5-5a

Spring-run Chinook Salmon in the Lower American River

Lifestage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative												
			Description	Value (°F)			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Non-Natal Juvenile Rearing	November through April	Monthly Mean Water Temperatures (°F)	Mouth of the American River	60	All Years		0.0	0.0	0.0	0.0	0.0	0.0	2.3						
				63	All Years		0.0	0.0	0.0	0.0	0.0	0.0	-0.9						
				65	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.2						
				68	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0						
				70	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0						
				75	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0						

Table AQ-T-5-5b

Fall-run Chinook Salmon in the Lower American River

Lifestage	Evaluation Period	Impact Indicator	Location		Criteria Value (°F)	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative													
			Description				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	September through December	Monthly Mean Water Temperatures (°F)	American River at Watt Avenue	60	All Years	-10.5	0.0	0.0										0.0		
				64	All Years	-1.3	0.0	0.0											4.8	
				68	All Years	0.0	0.0	0.0												-1.3
			Mouth of the American River	60	All Years	-1.4	0.0	0.0												0.0
				64	All Years	-3.5	0.0	0.0												0.6
				68	All Years	0.0	0.0	0.0												2.2
Adult Spawning	October through December	Monthly Mean Water Temperatures (°F)	American River at Watt Avenue	56	All Years	0.0	-10.8	0.0												
				58	All Years	-1.6	-0.5	0.0												
				60	All Years	-10.5	0.0	0.0												
				62	All Years	-12.2	0.0	0.0												
Embryo Incubation	October through March	Monthly Mean Water Temperatures (°F)	American River at Watt Avenue	56	All Years	0.0	-10.8	0.0	0.0	0.0	0.2									
				58	All Years	-1.6	-0.5	0.0	0.0	0.0	1.5									
				60	All Years	-10.5	0.0	0.0	0.0	0.0	0.0									
				62	All Years	-12.2	0.0	0.0	0.0	0.0	0.0									
Juvenile Rearing and Emigration	January through June	Monthly Mean Water Temperatures (°F)	American River at Nimbus Dam	60	All Years				0.0	0.0	0.0	0.2	1.0	-1.5						
				63	All Years				0.0	0.0	0.0	0.0	-2.0	-0.7						
				65	All Years				0.0	0.0	0.0	0.0	-1.5	-0.3						
				68	All Years				0.0	0.0	0.0	0.0	0.0	0.0	1.7					
				70	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.3					
				75	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0					
			American River at Watt Avenue	60	All Years				0.0	0.0	0.0	2.2	1.4	10.1						
				63	All Years				0.0	0.0	0.0	0.2	3.7	0.7						
				65	All Years				0.0	0.0	0.0	0.2	0.9	1.8						
				68	All Years				0.0	0.0	0.0	0.0	-1.2	-0.3						
				70	All Years				0.0	0.0	0.0	0.0	0.0	0.0						
				75	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.5					
			Mouth of the American River	60	All Years				0.0	0.0	0.0	2.3	-1.7	0.0						
				63	All Years				0.0	0.0	0.0	-0.9	-1.9	2.5						
				65	All Years				0.0	0.0	0.0	0.2	-0.8	-1.3						
				68	All Years				0.0	0.0	0.0	0.0	-0.8	-0.1						
70	All Years					0.0	0.0	0.0	0.0	-1.9	-0.4									
75	All Years				0.0	0.0	0.0	0.0	0.0	0.0	1.4									

Table AQ-T-5-5c

Steelhead in the Lower American River

Lifestage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative													
			Description	Value (°F)			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	November through April	Monthly mean water temperatures (°F)	American River at Watt Avenue	52	All Years		0.0	-3.3	0.0	0.9	6.1	-1.7								
				56	All Years		-10.8	0.0	0.0	0.0	0.2	-1.0								
				70	All Years		0.0	0.0	0.0	0.0	0.0	0.0								
			Mouth of the American River	52	All Years		0.0	1.0	0.0	-1.0	-0.8	0.0								
				56	All Years		-2.9	0.0	0.0	0.0	-0.9	2.2								
				70	All Years		0.0	0.0	0.0	0.0	0.0	0.0								
Adult Spawning	January through April	Monthly mean water temperatures (°F)	American River at Watt Avenue	52	All Years				0.0	0.9	6.1	-1.7								
				54	All Years				0.0	0.0	3.7	0.2								
				57	All Years				0.0	0.0	1.6	3.3								
				60	All Years				0.0	0.0	0.0	2.2								
Embryo Incubation	January through May	Monthly mean water temperatures (°F)	American River at Watt Avenue	52	All Years				0.0	0.9	6.1	-1.7	-0.1							
				54	All Years				0.0	0.0	3.7	0.2	0.1							
				57	All Years				0.0	0.0	1.6	3.3	3.3							
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	American River at Nimbus Dam	65	All Years		-1.2	0.0	0.0	0.0	0.0	0.0	-1.5	-0.3	0.8	-3.8	-1.5			
				68	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.7	-1.4	-0.1			
				72	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	-0.7	-0.7			
			American River at Watt Avenue	65	All Years		-3.7	0.0	0.0	0.0	0.0	0.0	0.2	0.9	1.8	0.8	-0.6	0.5		
				68	All Years		0.0	0.0	0.0	0.0	0.0	0.0	-1.2	-0.3	0.3	-3.0	-1.3			
				72	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	2.3	-0.7	-1.3			
			Mouth of the American River	75	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.5	-0.1	-1.4			
				65	All Years		0.2	0.0	0.0	0.0	0.0	0.0	0.2	-0.8	-1.3	4.6	0.6	2.8		
				68	All Years		0.0	0.0	0.0	0.0	0.0	0.0	-0.8	-0.1	-1.0	-2.0	2.2			
							72	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.3	-1.3	-1.9	0.3	
							75	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.2	-0.1	-1.2
Smolt Emigration	January through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	52	All Years				0.0	0.9	6.1	-1.7	-0.1	0.0						
				55	All Years				0.0	0.0	3.2	3.2	2.9	-0.2						
			Mouth of the American River	52	All Years				0.0	-1.0	-0.8	0.0	0.0	0.0						
				55	All Years				0.0	0.0	0.9	-0.7	-0.1	0.0						

Table AQ-T-5-5d

Green Sturgeon in the Lower American River

Lifestage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative											
			Description	Value (°F)		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	February through December	Monthly mean water temperatures (°F)	Mouth of the American River	61	All Years	-6.6	0.0	0.0		0.0	0.0	-2.1	0.5	0.2	0.0	0.0	0.0
Adult Spawning and Egg Incubation	March through August	Monthly mean water temperatures (°F)	Mouth of the American River	68	All Years						0.0	0.0	-0.8	-0.1	-1.0	-2.0	
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Mouth of the American River	66	All Years	-1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	-1.2	2.5	-2.0	7.7

Table AQ-T-5-5e

Pacific Lamprey in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location		Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative												
			Description	Criteria Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Nimbus Dam Release	50-64	All Years					0.3	1.5	4.7	-0.1	1.9	0.6	-0.4	0.5	
			American River at Watt Avenue	50-64	All Years					-1.4	0.6	-0.6	-0.5	-1.3	-1.9	-4.6	0.0	
			Mouth of the American River	50-64	All Years					0.1	-2.1	0.0	0.8	-1.8	1.7	1.8	0.0	
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Nimbus Dam Release	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	-0.7	-0.7
			American River at Watt Avenue	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	2.3	-0.7	-1.3
			Mouth of the American River	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	-1.3	-1.9	0.3

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-5f

River Lamprey in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	February through July	Monthly mean water temperatures (°F)	Nimbus Dam Release	50-64	All Years						1.5	4.7	-0.1	1.9	0.6	-0.4		
			American River at Watt Avenue	50-64	All Years						0.6	-0.6	-0.5	-1.3	-1.9	-4.6		
			Mouth of the American River	50-64	All Years						-2.1	0.0	0.8	-1.8	1.7	1.8		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Nimbus Dam Release	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	-0.7	-0.7
			American River at Watt Avenue	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	2.3	-0.7	-1.3
			Mouth of the American River	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	-1.3	-1.9	0.3

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-5g

Hardhead in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adults and Other Lifestages	Year-round	Monthly mean water temperatures (°F)	American River at Watt Avenue	65-82	All Years	-3.7	0.0	0.0	0.0	0.0	0.0	0.2	0.9	1.8	0.8	-0.5	0.5
Adult Spawning	April through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	59-64	All Years							2.1	-3.3	-1.1			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-5i

Splittail in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Spawning	February through May	Monthly mean water temperatures (°F)	Mouth of the American River	45-75	All Years						0.0	0.0	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-5j

Striped Bass in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	59-68	All Years							2.6	-0.8	1.1			
			Mouth of the American River	59-68	All Years							1.1	4.1	0.0			
Larvae, Fry, and Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	American River at Watt Avenue	61-71	All Years	-8.4	0.0	0.0	0.0	0.0	0.0	-0.4	-3.4	3.0	0.0	1.8	-0.6
			Mouth of the American River	61-71	All Years	-6.6	0.0	0.0	0.0	0.0	0.0	-2.1	2.0	0.3	1.0	1.5	-0.1

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-5k

American Shad in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	60-70	All Years								2.2	1.4	10.1			
			Mouth of the American River	60-70	All Years									2.3	0.2	0.4		
Larvae, Fry, and Juvenile Rearing and Emigration	July through November	Monthly mean water temperatures (°F)	American River at Watt Avenue	63-77	All Years	-3.8	0.0									4.0	3.4	-0.7
			Mouth of the American River	63-77	All Years	-9.9	0.0										-1.5	0.7

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-5I

Largemouth Bass in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative B relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Spawning	March through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	59-75	All Years							0.0	2.6	-2.0	0.3			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

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Alternative C Compared to No Action Alternative

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Table AQ-T-5-7a

Spring-run Chinook Salmon in the Lower American River

Lifestage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative												
			Description	Value (°F)			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Non-Natal Juvenile Rearing	November through April	Monthly Mean Water Temperatures (°F)	Mouth of the American River	60	All Years		0.0	0.0	0.0	0.0	0.0	0.0	3.7						
				63	All Years		0.0	0.0	0.0	0.0	0.0	0.0	-0.7						
				65	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.2						
				68	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0						
				70	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0						
				75	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0						

Table AQ-T-5-7b

Fall-run Chinook Salmon in the Lower American River

Lifestage	Evaluation Period	Impact Indicator	Location		Criteria Value (°F)	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative											
			Description				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	September through December	Monthly Mean Water Temperatures (°F)	American River at Watt Avenue	60	All Years	-3.0	0.0	0.0									0.0	
				64	All Years	-3.1	0.0	0.0									1.9	
				68	All Years	0.0	0.0	0.0									-1.1	
			Mouth of the American River	60	All Years	-0.9	0.0	0.0										0.0
				64	All Years	-4.0	0.0	0.0										0.6
				68	All Years	0.0	0.0	0.0										3.6
Adult Spawning	October through December	Monthly Mean Water Temperatures (°F)	American River at Watt Avenue	56	All Years	0.0	-7.1	0.0										
				58	All Years	-1.5	-0.5	0.0										
				60	All Years	-3.0	0.0	0.0										
				62	All Years	-11.8	0.0	0.0										
Embryo Incubation	October through March	Monthly Mean Water Temperatures (°F)	American River at Watt Avenue	56	All Years	0.0	-7.1	0.0	0.0	0.0	-0.6							
				58	All Years	-1.5	-0.5	0.0	0.0	0.0	1.2							
				60	All Years	-3.0	0.0	0.0	0.0	0.0	0.0							
				62	All Years	-11.8	0.0	0.0	0.0	0.0	0.0							
Juvenile Rearing and Emigration	January through June	Monthly Mean Water Temperatures (°F)	American River at Nimbus Dam	60	All Years				0.0	0.0	0.0	0.3	0.1	0.5				
				63	All Years				0.0	0.0	0.0	0.0	-1.4	-0.3				
				65	All Years				0.0	0.0	0.0	0.0	-1.5	-1.2				
				68	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.2			
				70	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0			
			American River at Watt Avenue	60	All Years				0.0	0.0	0.0	0.0	0.0	3.0	1.3	6.2		
				63	All Years				0.0	0.0	0.0	0.0	0.4	5.0	0.7			
				65	All Years				0.0	0.0	0.0	0.0	0.2	1.0	4.5			
				68	All Years				0.0	0.0	0.0	0.0	0.0	-1.2	-0.3			
				70	All Years				0.0	0.0	0.0	0.0	0.0	0.0	-1.1			
			Mouth of the American River	60	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
				63	All Years				0.0	0.0	0.0	0.0	0.0	-0.7	1.7	4.2		
				65	All Years				0.0	0.0	0.0	0.0	0.0	0.2	-1.9	-1.3		
				68	All Years				0.0	0.0	0.0	0.0	0.0	-0.9	1.2			
				70	All Years				0.0	0.0	0.0	0.0	0.0	-2.3	-0.9			
75	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2						

Table AQ-T-5-7c

Steelhead in the Lower American River

Lifestage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative												
			Description	Value (°F)			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Immigration and Holding	November through April	Monthly mean water temperatures (°F)	American River at Watt Avenue	52	All Years	0.0	-3.9	0.0	2.0	6.6	-1.2								
				56	All Years	-7.1	0.0	0.0	0.0	-0.6	1.5								
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0								
			Mouth of the American River	52	All Years	0.0	1.1	0.0	1.0	-0.6	0.0								
				56	All Years	-1.8	0.0	0.0	0.0	0.2	1.2								
				70	All Years	0.0	0.0	0.0	0.0	0.0	0.0								
Adult Spawning	January through April	Monthly mean water temperatures (°F)	American River at Watt Avenue	52	All Years				0.0	2.0	6.6	-1.2							
				54	All Years				0.0	0.0	2.4	0.2							
				57	All Years				0.0	0.0	2.3	4.0							
				60	All Years				0.0	0.0	0.0	3.0							
Embryo Incubation	January through May	Monthly mean water temperatures (°F)	American River at Watt Avenue	52	All Years				0.0	2.0	6.6	-1.2	-0.1						
				54	All Years				0.0	0.0	2.4	0.2	0.6						
				57	All Years				0.0	0.0	2.3	4.0	0.8						
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	American River at Nimbus Dam	65	All Years	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-1.5	-1.2	-0.1	-2.9	-2.0		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	-0.5	-2.4	-1.2		
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-1.2	-0.7		
			American River at Watt Avenue	65	All Years	-4.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	4.5	-2.5	-1.3	-0.6		
				68	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.2	-0.3	0.2	0.6	-1.1		
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	-2.5	-2.8		
			Mouth of the American River	65	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	-0.2	-1.4	
				68	All Years	0.4	0.0	0.0	0.0	0.0	0.0	0.2	-1.9	-1.3	4.2	0.0	-2.3		
				72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.9	1.2	-2.3	-2.1	3.6	
			Smolt Emigration	January through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	52	All Years				0.0	2.0	6.6	-1.2	-0.1	0.0		
							55	All Years				0.0	0.0	3.7	1.9	1.3	-0.2		
						Mouth of the American River	52	All Years				0.0	1.0	-0.6	0.0	0.0	0.0		
55	All Years								0.0	0.0	1.1	-1.6	0.0	0.0					

Table AQ-T-5-7d

Green Sturgeon in the Lower American River

Lifestage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative											
			Description	Value (°F)		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	February through December	Monthly mean water temperatures (°F)	Mouth of the American River	61	All Years	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	0.4	0.3	0.0	0.0	0.0
Adult Spawning and Egg Incubation	March through August	Monthly mean water temperatures (°F)	Mouth of the American River	68	All Years						0.0	0.0	-0.9	1.2	-2.3	-2.1	
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Mouth of the American River	66	All Years	-0.6	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.5	5.0	-3.7	7.3

Table AQ-T-5-7e

Pacific Lamprey in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location		Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative											
			Description	Criteria Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Nimbus Dam Release	50-64	All Years				0.4	2.5	2.2	-0.1	2.1	1.1	-1.3	1.1	
			American River at Watt Avenue	50-64	All Years				-1.7	1.6	-0.3	-0.6	-1.9	-3.5	-8.6	1.7	
			Mouth of the American River	50-64	All Years				0.1	-2.9	0.0	0.6	-2.2	0.5	0.4	0.0	
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Nimbus Dam Release	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-1.2	-0.7
			American River at Watt Avenue	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	-2.5	-2.8
			Mouth of the American River	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.9	-2.4	-2.9	-3.2

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-7f

River Lamprey in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	February through July	Monthly mean water temperatures (°F)	Nimbus Dam Release	50-64	All Years						2.5	2.2	-0.1	2.1	1.1	-1.3		
			American River at Watt Avenue	50-64	All Years						1.6	-0.3	-0.6	-1.9	-3.5	-8.6		
			Mouth of the American River	50-64	All Years						-2.9	0.0	0.6	-2.2	0.5	0.4		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Nimbus Dam Release	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-1.2	-0.7	
			American River at Watt Avenue	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	-2.5	-2.8	
			Mouth of the American River	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.9	-2.4	-2.9	-3.2

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-7g

Hardhead in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adults and Other Lifestages	Year-round	Monthly mean water temperatures (°F)	American River at Watt Avenue	65-82	All Years	-4.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	4.5	-2.5	-1.2	-0.6
Adult Spawning	April through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	59-64	All Years							3.8	-3.9	-2.5			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-7i

Splittail in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Spawning	February through May	Monthly mean water temperatures (°F)	Mouth of the American River	45-75	All Years						0.0	0.0	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-7j

Striped Bass in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	59-68	All Years								4.4	-0.8	1.3			
			Mouth of the American River	59-68	All Years									3.8	0.9	-1.3		
Larvae, Fry, and Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	American River at Watt Avenue	61-71	All Years	-7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.4	-0.4	7.4	1.1	3.4	2.9
			Mouth of the American River	61-71	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	1.9	1.4	1.1	2.7	1.4

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-7k

American Shad in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	60-70	All Years								3.0	1.3	7.3			
			Mouth of the American River	60-70	All Years									3.7	2.6	1.1		
Larvae, Fry, and Juvenile Rearing and Emigration	July through November	Monthly mean water temperatures (°F)	American River at Watt Avenue	63-77	All Years	-5.5	0.0									4.2	0.5	-3.0
			Mouth of the American River	63-77	All Years	-10.6	0.0										-0.3	0.9

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-71

Largemouth Bass in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative C relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Spawning	March through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	59-75	All Years							0.0	4.4	-2.0	1.0			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

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Alternative D Compared to No Action Alternative

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Table AQ-T-5-9a

Spring-run Chinook Salmon in the Lower American River

Lifestage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative												
			Description	Value (°F)			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Non-Natal Juvenile Rearing	November through April	Monthly Mean Water Temperatures (°F)	Mouth of the American River	60	All Years		0.0	0.0	0.0	0.0	0.0	0.0	2.7						
				63	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.1						
				65	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.5						
				68	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0						
				70	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0						
				75	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0						

Table AQ-T-5-9b

Fall-run Chinook Salmon in the Lower American River

Lifestage	Evaluation Period	Impact Indicator	Location		Criteria Value (°F)	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative													
			Description				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Adult Immigration and Holding	September through December	Monthly Mean Water Temperatures (°F)	American River at Watt Avenue	60	All Years	-4.0	0.0	0.0										0.0		
				64	All Years	1.4	0.0	0.0											3.2	
				68	All Years	0.0	0.0	0.0												-2.7
			Mouth of the American River	60	All Years	-1.3	0.0	0.0												0.0
				64	All Years	-3.4	0.0	0.0												1.4
				68	All Years	0.0	0.0	0.0												2.1
Adult Spawning	October through December	Monthly Mean Water Temperatures (°F)	American River at Watt Avenue	56	All Years	0.0	-0.5	0.0												
				58	All Years	-2.6	-0.5	0.0												
				60	All Years	-4.0	0.0	0.0												
				62	All Years	-6.5	0.0	0.0												
Embryo Incubation	October through March	Monthly Mean Water Temperatures (°F)	American River at Watt Avenue	56	All Years	0.0	-0.5	0.0	0.0	0.0	-0.7									
				58	All Years	-2.6	-0.5	0.0	0.0	0.0	0.0									
				60	All Years	-4.0	0.0	0.0	0.0	0.0	0.0									
				62	All Years	-6.5	0.0	0.0	0.0	0.0	0.0									
Juvenile Rearing and Emigration	January through June	Monthly Mean Water Temperatures (°F)	American River at Nimbus Dam	60	All Years				0.0	0.0	0.0	1.1	1.0	0.8						
				63	All Years				0.0	0.0	0.0	0.0	-0.9	0.8						
				65	All Years				0.0	0.0	0.0	0.0	-1.5	-1.0						
				68	All Years				0.0	0.0	0.0	0.0	0.0	0.0	1.5					
				70	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0					
			American River at Watt Avenue	60	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				63	All Years				0.0	0.0	0.0	0.0	0.0	0.0	-0.6	-1.8	3.0			
				65	All Years				0.0	0.0	0.0	0.0	0.0	0.0	1.0	-1.2	2.0			
				68	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	-3.0			
				70	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-0.4			
			Mouth of the American River	60	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4			
				63	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				65	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				68	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				70	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Mouth of the American River	60	All Years				0.0	0.0	0.0	0.0	0.0	0.0	2.7	-0.5	-0.1						
	63	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.6	2.8						
	65	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.5	-0.8	2.1						
	68	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.9	1.5						
	70	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.8	-0.5						
75	All Years				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9						

Table AQ-T-5-9c

Steelhead in the Lower American River

Lifestage	Evaluation Period	Impact Indicator	Location		Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative											
			Description	Value (°F)			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	November through April	Monthly mean water temperatures (°F)	American River at Watt Avenue	52	All Years		0.0	4.2	0.0	0.4	3.3	-0.7						
				56	All Years		-0.5	0.0	0.0	0.0	-0.7	1.0						
				70	All Years		0.0	0.0	0.0	0.0	0.0	0.0						
			Mouth of the American River	52	All Years		0.0	2.1	0.0	-0.9	-0.8	0.0						
				56	All Years		-2.6	0.0	0.0	0.0	1.2	1.4						
				70	All Years		0.0	0.0	0.0	0.0	0.0	0.0						
Adult Spawning	January through April	Monthly mean water temperatures (°F)	American River at Watt Avenue	52	All Years				0.0	0.4	3.3	-0.7						
				54	All Years				0.0	0.0	-1.9	-0.4						
				57	All Years				0.0	0.0	0.2	-0.2						
				60	All Years				0.0	0.0	0.0	-0.6						
Embryo Incubation	January through May	Monthly mean water temperatures (°F)	American River at Watt Avenue	52	All Years				0.0	0.4	3.3	-0.7	-0.1					
				54	All Years				0.0	0.0	-1.9	-0.4	-0.9					
				57	All Years				0.0	0.0	0.2	-0.2	3.4					
				60	All Years				0.0	0.0	0.0	-0.6	-1.8					
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	American River at Nimbus Dam	65	All Years		-0.2	0.0	0.0	0.0	0.0	0.0	-1.5	-1.0	-0.3	-3.5	-3.1	
				68	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	-0.3	-2.3	-1.3	
				72	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	-1.0	-0.7	
			American River at Watt Avenue	65	All Years		-1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.5	-3.0	-2.5	3.7	-3.8
				68	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-0.4	1.4	0.6	-2.7
				72	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	-1.5	-2.0
				75	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	-0.1	-1.4
			Mouth of the American River	65	All Years		-2.5	0.0	0.0	0.0	0.0	0.0	0.5	-0.8	2.1	0.0	-0.7	-2.1
				68	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.9	1.5	-2.3	-2.1	2.1
				72	All Years		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-1.6	-0.9	-2.1
Smolt Emigration	January through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	52	All Years				0.0	0.4	3.3	-0.7	-0.1	0.0				
				55	All Years				0.0	0.0	0.7	4.2	1.7	-0.1				
			Mouth of the American River	52	All Years				0.0	-0.9	-0.8	0.0	0.0	0.0				
				55	All Years				0.0	0.0	-0.1	-1.4	-0.1	0.0				

Table AQ-T-5-9d

Green Sturgeon in the Lower American River

Lifestage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative											
			Description	Value (°F)		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adult Immigration and Holding	February through December	Monthly mean water temperatures (°F)	Mouth of the American River	61	All Years	-7.3	0.0	0.0		0.0	0.0	-1.5	1.1	0.2	0.0	0.0	0.0
Adult Spawning and Egg Incubation	March through August	Monthly mean water temperatures (°F)	Mouth of the American River	68	All Years						0.0	0.0	-0.9	1.5	-2.3	-2.1	
Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Mouth of the American River	66	All Years	-0.6	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.7	-0.9	-3.5	5.2

Table AQ-T-5-9e

Pacific Lamprey in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location		Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative												
			Description	Criteria Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	January through August	Monthly mean water temperatures (°F)	Nimbus Dam Release	50-64	All Years					0.4	0.9	4.5	-0.1	0.9	-0.2	-0.3	1.7	
			American River at Watt Avenue	50-64	All Years					-0.7	0.3	-1.1	-0.7	-1.0	-3.5	-0.6	2.2	
			Mouth of the American River	50-64	All Years					0.4	-2.7	0.0	-0.2	-2.7	-0.4	0.2	0.0	
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Nimbus Dam Release	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	-1.0	-0.7
			American River at Watt Avenue	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	-1.5	-2.0
			Mouth of the American River	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-1.6	-0.9	-2.1

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-9f

River Lamprey in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning and Egg Incubation	February through July	Monthly mean water temperatures (°F)	Nimbus Dam Release	50-64	All Years						0.9	-4.5	-0.1	0.9	-0.2	-0.3		
			American River at Watt Avenue	50-64	All Years						0.3	-1.1	-0.7	-1.0	-3.5	-0.6		
			Mouth of the American River	50-64	All Years						-2.7	0.0	-0.2	-2.7	-0.4	0.2		
Ammocoete Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	Nimbus Dam Release	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	-1.0	-0.7
			American River at Watt Avenue	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	-1.5	-2.0
			Mouth of the American River	72	All Years	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-1.6	-0.9	-2.1

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-9g

Hardhead in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative											
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Adults and Other Lifestages	Year-round	Monthly mean water temperatures (°F)	American River at Watt Avenue	65-82	All Years	-1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.5	-3.0	-2.5	3.8	-3.8
Adult Spawning	April through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	59-64	All Years							0.8	-1.7	-3.0			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-9i

Splittail in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Spawning	February through May	Monthly mean water temperatures (°F)	Mouth of the American River	45-75	All Years						0.0	0.0	0.0	0.0				

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-9j

Striped Bass in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	59-68	All Years								1.5	0.3	0.9			
			Mouth of the American River	59-68	All Years									2.8	3.4	-1.6		
Larvae, Fry, and Juvenile Rearing and Emigration	Year-round	Monthly mean water temperatures (°F)	American River at Watt Avenue	61-71	All Years	-3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.0	3.7	0.9	1.3	1.9
			Mouth of the American River	61-71	All Years	-7.3	0.0	0.0	0.0	0.0	0.0	0.0	-1.5	2.6	1.0	1.0	1.5	0.1

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-9k

American Shad in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Adult Spawning, Embryo Incubation, and Initial Rearing	April through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	60-70	All Years								-0.6	-1.8	3.4			
			Mouth of the American River	60-70	All Years									2.7	0.3	0.4		
Larvae, Fry, and Juvenile Rearing and Emigration	July through November	Monthly mean water temperatures (°F)	American River at Watt Avenue	63-77	All Years	-2.6	0.0									3.3	-0.4	-0.7
			Mouth of the American River	63-77	All Years	-6.9	0.0										-0.7	0.9

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

Table AQ-T-5-9I

Largemouth Bass in the Lower American River

Life Stage	Evaluation Period	Impact Indicator	Location	Criteria	Range	Net Change in Probability of Exceedance under Alternative D relative to the No Action Alternative												
			Description	Value		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Spawning	March through June	Monthly mean water temperatures (°F)	American River at Watt Avenue	59-75	All Years							0.0	1.5	-0.7	0.5			

¹Water temperature ranges are evaluated by calculating the net change in the probability of water temperatures occurring within the specified range.

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