

Contents

List of Tables	vii
List of Figures.....	xlviii
List of Acronyms and Abbreviations.....	lxiii
Executive Summary.....	ES-1
ES.1 Purpose of this Environmental Impact Report	ES-3
ES.2 Revisions to the Draft Environmental Impact Report.....	ES-3
ES.3 Project Background.....	ES-5
ES.4 Summary of Proposed Project	ES-7
ES.5 Summary of Environmental Consequences.....	ES-10
ES.6 Summary of Findings	ES-10
ES.7 Areas of Controversy	ES-15
ES.8 Issues to be Resolved.....	ES-15
Chapter 1 Introduction	1-1
1.1 Purpose of the Environmental Impact Report.....	1-1
1.2 EIR Preparation Process.....	1-1
1.2.1 Notice of Preparation and Scoping	1-2
1.2.2 Initial Study	1-2
1.2.3 DEIR.....	1-3
1.2.4 FEIR and Certification.....	1-4
1.3 EIR Organization.....	1-4
Chapter 2 Project Description	2-1
2.1 Introduction	2-1
2.1.1 Project Objectives.....	2-2
2.1.2 Project Location	2-2
2.1.3 Description of Existing Facilities Relevant to Proposed Project Operations	2-4
2.1.4 Description of Existing SWP Water Service Contracts.....	2-9
2.1.5 SWP Settlement Agreements	2-12
2.1.6 SWP Allocation and Forecasting	2-13
2.1.7 Daily Operations	2-13
2.1.8 Delta Fish Agreement	2-15
2.2 Existing Regulations	2-15
2.2.1 U.S. Army Corps of Engineers Permits.....	2-15
2.2.2 State Water Resources Control Board Water Rights and D-1641	2-16

2.2.3	Federal Endangered Species Act.....	2-16
2.2.4	California Endangered Species Act	2-17
2.3	Description of the Proposed Project.....	2-17
2.3.1	Seasonal Operations	2-20
2.3.2	Expansion of the CCF Increased Winter Diversion Window	2-20
2.3.3	Old and Middle River Flow Management	2-21
2.3.4	White Sturgeon Protection Measures	2-33
2.3.5	Spring Delta Outflow.....	2-33
2.3.6	Delta Smelt Summer-Fall Habitat	2-36
2.3.7	John E. Skinner Delta Fish Protective Facility	2-37
2.3.8	Habitat Restoration.....	2-39
2.3.9	Delta Smelt Supplementation.....	2-39
2.3.10	Longfin Smelt Culture Program	2-40
2.3.11	Water Transfers.....	2-41
2.3.12	Georgiana Slough Salmonid Migratory Barrier Operations	2-42
2.3.13	Agricultural Barriers	2-43
2.3.14	Barker Slough Pumping Plant	2-43
2.3.15	Clifton Court Forebay Weed Management	2-44
2.3.16	Suisun Marsh	2-45
2.3.17	Monitoring.....	2-45
2.3.18	Adaptive Management.....	2-47
2.3.19	Special Studies	2-48
2.3.20	Drought	2-54
2.3.21	Additional Actions Retained from 2020 ITP	2-55
2.3.22	Governance	2-56
Chapter 3	Scope of Analysis	3-1
3.1	Geographic Scope of the Analysis.....	3-1
3.2	Issues Eliminated from Detailed Consideration in the EIR	3-1
3.3	Environmental Baseline	3-3
3.4	Impact of Climate Change.....	3-3
3.5	Approach to Modeling	3-4
3.5.1	CalSim 3.....	3-4
3.5.2	Delta Simulation Model II	3-4
3.5.3	Semi-Implicit Cross-Scale Hydroscience Integrated System Model	3-5
3.5.4	Biological Modeling.....	3-5
3.5.5	Appropriate Use of Modeling	3-7
3.6	Model Scenarios Included in the EIR	3-7

Chapter 4	Surface Water Hydrology	4-1
4.1	Environmental Setting	4-1
4.1.1	Sacramento River	4-2
4.1.2	Sacramento and San Joaquin Bay-Delta	4-6
4.1.3	SWP and CVP Delta Water Facilities	4-9
4.1.4	Water Supplies Used by State Water Project Water Users	4-16
4.2	Regulatory Setting.....	4-18
4.3	Comparison of the Proposed Project with the Baseline Conditions.....	4-18
4.3.1	Thresholds of Significance	4-19
4.3.2	Method of Analysis	4-19
4.3.3	Comparison of Sacramento River Flows into Delta, Delta Outflow, and OMR Flow.....	4-19
4.3.4	Comparison of SWP Banks Pumping Plant Exports	4-27
Chapter 5	Surface Water Quality	5-1
5.1	Environmental Setting	5-1
5.1.1	Primary Factors Affecting Existing Water Quality.....	5-1
5.1.2	Beneficial Uses	5-2
5.1.3	Water Quality Impairments	5-3
5.1.4	Existing Surface Water Quality	5-5
5.2	Regulatory Setting.....	5-11
5.3	Impacts of the Proposed Project	5-12
5.3.1	Thresholds of Significance	5-13
5.3.2	Methods of Analysis.....	5-13
5.3.3	Evaluation of the Proposed Project	5-15
Chapter 6	Aquatic Biological Resources	6-1
6.1	Environmental Setting	6-1
6.1.1	Study Area.....	6-1
6.1.2	Fish and Aquatic Species of Management Concern	6-1
6.1.3	Habitat Conditions and Environmental Stressors.....	6-3
6.1.4	Delta and Suisun Bay/Marsh.....	6-3
6.1.5	San Pablo and San Francisco Bays	6-26
6.2	Regulatory Environment and Compliance Requirements	6-28
6.2.1	Federal Plans, Policies, and Regulations	6-28
6.2.2	State Plans, Policies, and Regulations.....	6-32
6.2.3	Regional and Local Plans, Policies, and Regulations.....	6-36
6.3	Threshold of Significance and Approach to Impact Assessment.....	6-36
6.3.1	Threshold of Significance	6-36

6.3.2	Operations Effects	6-37
6.3.3	Maintenance and Other Effects.....	6-38
6.4	Impacts of the Proposed Project	6-38
6.4.1	Delta Smelt.....	6-38
6.4.2	Longfin Smelt	6-115
6.4.3	Winter-Run Chinook Salmon	6-136
6.4.4	Spring-Run Chinook Salmon.....	6-214
6.4.5	Fall-Run and Late-Fall-Run Chinook Salmon	6-230
6.4.6	Central Valley Steelhead	6-258
6.4.7	North American Green Sturgeon	6-268
6.4.8	White Sturgeon	6-272
6.4.9	Pacific Lamprey and Western River Lamprey	6-281
6.4.10	Native Minnows (Sacramento Hitch, Sacramento Splittail, Hardhead, and Central California Roach).....	6-285
6.4.11	Starry Flounder.....	6-290
6.4.12	Northern Anchovy	6-295
6.4.13	Striped Bass	6-297
6.4.14	American Shad.....	6-303
6.4.15	Threadfin Shad	6-307
6.4.16	Black Bass	6-310
6.4.17	California Bay Shrimp	6-314
6.4.18	Killer Whale	6-318
6.5	Mitigation Measures.....	6-318
Chapter 7	Tribal Cultural Resources.....	7-1
7.1	Environmental Setting	7-1
7.1.1	Methods for Resource Identification.....	7-2
7.1.2	Delta Tribal Cultural Landscape	7-8
7.1.3	Potential Tribal Cultural Resources.....	7-9
7.2	Regulatory Setting.....	7-10
7.2.1	California Environmental Quality Act	7-10
7.2.2	California Natural Resources Agency Tribal Consultation Policy.....	7-11
7.2.3	California Department of Water Resources Tribal Engagement Policy.....	7-11
7.3	Environmental Impacts	7-11
7.3.1	Impact Mechanisms for Tribal Cultural Resources	7-11
7.3.2	Thresholds of Significance	7-12
7.3.3	Impact Analysis	7-13

Chapter 8	Environmental Justice	8-1
8.1	Regulatory Setting.....	8-1
8.1.1	Federal	8-1
8.1.2	State	8-3
8.2	Background	8-4
8.2.1	Minority Populations	8-4
8.2.2	Poverty Levels	8-6
8.3	Environmental Impacts and Mitigation Measures	8-6
8.3.1	Thresholds of Significance	8-6
8.3.2	Impact Analysis	8-7
Chapter 9	Climate Change Resiliency and Adaptation	9-1
9.1	Introduction	9-1
9.1.1	Purpose	9-1
9.1.2	Organization.....	9-4
9.1.3	Climate Change Background.....	9-4
9.2	Affected Environment and Resources	9-5
9.2.1	Global Climate Change Trends.....	9-6
9.2.2	Climate Change Trends in California.....	9-9
9.2.3	Climate Change Trends and Associated Impacts on the Study Area	9-12
9.2.4	Application of California Climate Projections to Proposed Long-Term Operations Changes.....	9-19
9.3	Applicable Laws, Regulations, and Programs	9-20
9.4	Potential Climate Change Impacts on Baseline Operations and the Proposed Project.....	9-21
9.4.1	X2	9-22
9.4.2	State Water Project Exports	9-26
9.4.3	Old and Middle River Flows	9-31
9.4.4	Delta Outflow.....	9-36
9.4.5	San Joaquin River at Vernalis	9-40
9.4.6	Sacramento River at Freeport.....	9-44
9.5	Climate Change Resiliency and Adaptation Benefits.....	9-47
Chapter 10	Other CEQA Discussions	10-1
10.1	Cumulative Impacts	10-1
10.1.1	CEQA Requirements for Cumulative Assessment	10-1
10.1.2	Cumulative Context and Approach	10-2
10.1.3	Scope of Cumulative Analysis.....	10-3
10.1.4	Surface Water Hydrology	10-21

10.1.5	Surface Water Quality	10-21
10.1.6	Aquatic Biological Resources.....	10-23
10.1.7	Tribal Cultural Resources.....	10-191
10.1.8	Environmental Justice	10-191
10.1.9	Climate Change Resiliency and Adaptation.....	10-191
10.2	Growth-Inducing Impacts	10-192
10.2.1	Direct Impacts of the Proposed Project	10-192
10.2.2	Potential of the Proposed Project to Induce Growth.....	10-193
Chapter 11 Alternatives to the Proposed Project.....		11-1
11.1	Introduction	11-1
11.2	Range of Alternatives Considered	11-1
11.2.1	Alternatives Considered but Not Analyzed Further	11-2
11.2.2	Alternatives Considered in this Environmental Impact Report.....	11-6
11.3	No Project Alternative	11-6
11.3.1	Surface Water Hydrology	11-7
11.3.2	Surface Water Quality	11-7
11.3.3	Aquatic Biological Resources.....	11-7
11.3.4	Other Resources	11-7
11.4	Alternative 1: May Deployment of SWP-Facilitated Following Inject and No Expansion of the CCF Increased Winter Diversion Window	11-7
11.4.1	Surface Water Hydrology	11-8
11.4.2	Surface Water Quality	11-22
11.4.3	Aquatic Biological Resources.....	11-28
11.4.4	Other Resources	11-66
11.5	Alternative 2: May Deployment of SWP-Facilitated Following Inject and Expansion of the CCF Increased Winter Diversion Window	11-66
11.5.1	Surface Water Hydrology	11-67
11.5.2	Surface Water Quality	11-77
11.5.3	Aquatic Biological Resources.....	11-83
11.5.4	Other Resources	11-91
11.6	Alternative 3: Flexible Deployment of SWP-Facilitated Following Inject and No Expansion of the CCF Increased Winter Diversion Window	11-91
11.6.1	Surface Water Hydrology	11-92
11.6.2	Surface Water Quality	11-106
11.6.3	Aquatic Biological Resources.....	11-113
11.6.4	Other Resources	11-125
11.7	Environmentally Superior Alternative	11-125

Chapter 12	References.....	12-1
12.1	Chapter 1, Introduction	12-1
12.2	Chapter 2, Project Description.....	12-1
12.3	Chapter 3, Scope of Analysis.....	12-3
12.4	Chapter 4, Surface Water Hydrology	12-4
12.5	Chapter 5, Surface Water Quality	12-5
12.6	Chapter 6, Aquatic Biological Resources	12-10
12.6.1	References Cited	12-10
12.6.2	Personal Communications.....	12-38
12.7	Chapter 7, Tribal Cultural Resources	12-38
12.8	Chapter 8, Environmental Justice	12-39
12.9	Chapter 9, Climate Change Resiliency	12-39
12.10	Chapter 10, Other CEQA Discussions.....	12-44
12.11	Chapter 11, Alternatives to the Proposed Project.....	12-48
Chapter 13	Preparers and Other Persons Consulted.....	13-1
13.1	California Department of Water Resources.....	13-1
13.2	ICF	13-2
13.3	Jacobs.....	13-3
13.4	Cramer Fish Sciences	13-3
13.5	Robertson Bryan Incorporated	13-3
Appendix 2A	Project Description Elements	
Attachment 1	John E. Skinner Delta Fish Protective Facility Standard Operating Procedures for Fish Salvage	
Attachment 2	Tidal Habitat Restoration Administrative Process and Documentation Requirements	
Attachment 3	South Delta Temporary Barriers Project Annual Construction and Operation Flow Chart for Calendar Years 2023–2027	
Attachment 4	North Bay Aqueduct Fish Screen Sediment and Aquatic Weed Removal Standard Operating Procedures	
Attachment 5	Clifton Court Forebay Aquatic Weed Management Standard Operating Procedures	
Attachment 6	Drought Toolkit	
Appendix 2B	Adaptive Management Program	
Attachment 1	Adaptive Management Program Framework and Implementation	
Attachment 2	Adaptive Management Actions and Programs	
Appendix 2C	Winter-run Chinook Salmon Juvenile Production Estimates	

Appendix 2D	Geographic Scope of Project’s Influence on Flow
Attachment 1	Technical Memorandum: DRAFT Upstream Screening-Level Analysis for Fish and Aquatic Resources, Long-Term Operations of the State Water Project
Appendix 2E	Delta Smelt Supplementation Strategy
Appendix 2F	Georgiana Slough Salmonid Migratory Barrier Operations Plan
Appendix 3A	Initial Study
Appendix 4A	Model Assumptions
Attachment 1	Model Assumptions
Attachment 2	CalSim 3 Model Assumptions Callouts
Attachment 3	DSM2 Model Assumptions Callouts
Attachment 4	DSM2 PTM Documentation
Attachment 5	DSM2 ECO-PTM Documentation
Attachment 6	Scenario Related Changes to CalSim 3 and DSM2
Attachment 7	SWP Proportion
Attachment 8	Model Limitations
Attachment 9	Suisun Marsh Salinity Control Gate Operation Sensitivity Analysis
Attachment 10	CalSim Model Updates Between DEIR and FEIR
Appendix 4B	Model Results
Attachment 1a	CalSim 3 Storage and Elevation Results (DEIR)
Attachment 1b	CalSim 3 Storage and Elevation Results (FEIR)
Attachment 2a	CalSim 3 Flow Results (DEIR)
Attachment 2b	CalSim 3 Flow Results (FEIR)
Attachment 3a	CalSim 3 Diversion Results (DEIR)
Attachment 3b	CalSim 3 Diversion Results (FEIR)
Attachment 4a	CalSim 3 X2 Results (DEIR)
Attachment 4b	CalSim 3 X2 Results (FEIR)
Attachment 5a	DSM2 Stage Results (DEIR)
Attachment 5b	DSM2 Stage Results (FEIR)
Attachment 6a	DSM2 Electrical Conductivity Results (DEIR)
Attachment 6b	DSM2 Electrical Conductivity Results (FEIR)
Attachment 7a	DSM2 Chloride Results (DEIR)
Attachment 7b	DSM2 Chloride Results (FEIR)
Attachment 8	DSM2 Water Quality Compliance Results
Attachment 9	CalSim 3 Water Quality Compliance Results
Appendix 4C	Alternatives Model Results
Attachment 1	CalSim 3 Model Assumptions Callouts
Attachment 2a	CalSim 3 Storage and Elevation Results (DEIR)

Attachment 2b	CalSim 3 Storage and Elevation Results (FEIR)
Attachment 3a	CalSim 3 Flow Results (DEIR)
Attachment 3b	CalSim 3 Flow Results (FEIR)
Attachment 4a	CalSim 3 Diversion Results (DEIR)
Attachment 4b	CalSim 3 Diversion Results (FEIR)
Attachment 5a	CalSim 3 X2 Results (DEIR)
Attachment 5b	CalSim 3 X2 Results (FEIR)

Appendix 4D Climate Change Projections Development

Appendix 4E Operations Sensitivity to Climate Change, Temporary Urgency Change Petitions, and the Interim Operating Plan

Appendix 4F Cumulative Model Results

Attachment 1	CalSim 3 Model Assumptions Callouts
Attachment 2a	CalSim 3 Storage and Elevation Results (DEIR)
Attachment 2b	CalSim 3 Storage and Elevation Results (FEIR)
Attachment 3a	CalSim 3 Flow Results (DEIR)
Attachment 3b	CalSim 3 Flow Results (FEIR)
Attachment 4a	CalSim 3 Diversion Results (DEIR)
Attachment 4b	CalSim 3 Diversion Results (FEIR)
Attachment 5a	CalSim 3 X2 Results (DEIR)
Attachment 5b	CalSim 3 X2 Results (FEIR)

Appendix 4G Cumulative Model Results

Attachment 1	CalSim 3 Model Assumptions Callouts
Attachment 2a	CalSim 3 Storage and Elevation Results (DEIR)
Attachment 2b	CalSim 3 Storage and Elevation Results (FEIR)
Attachment 3a	CalSim 3 Flow Results (DEIR)
Attachment 3b	CalSim 3 Flow Results (FEIR)
Attachment 4a	CalSim 3 Diversion Results (DEIR)
Attachment 4b	CalSim 3 Diversion Results (FEIR)
Attachment 5a	CalSim 3 X2 Results (DEIR)
Attachment 5b	CalSim 3 X2 Results (FEIR)

Appendix 4H Cumulative with Climate Change Model Results

Attachment 1a	CalSim 3 Storage and Elevation Results (DEIR)
Attachment 1b	CalSim 3 Storage and Elevation Results (FEIR)
Attachment 2a	CalSim 3 Flow Results (DEIR)
Attachment 2b	CalSim 3 Flow Results (FEIR)
Attachment 3a	CalSim 3 Diversion Results (DEIR)
Attachment 3b	CalSim 3 Diversion Results (FEIR)
Attachment 4a	CalSim 3 X2 Results (DEIR)

Attachment 4b	CalSim 3 X2 Results (FEIR)
Appendix 4I	Operations Sensitivity to Drought Conditions
Appendix 4J	Proposed Project and Alternative 1 Comparison
Appendix 4K	Alternative 1 with Early Voluntary Agreement Implementation
Attachment 1	CalSim 3 Model Assumptions Callouts
Attachment 2	CalSim 3 Storage and Elevation Results
Attachment 3	CalSim 3 Flow Results
Attachment 4	CalSim 3 Diversion Results
Attachment 5	CalSim 3 X2 Results
Attachment 6	DSM2 Stage Results
Appendix 4L	Proposed Project Hydrology with Early Spring Outflow Implementation
Attachment 1	CalSim 3 Model Assumptions Callouts
Attachment 2	CalSim 3 Storage and Elevation Results
Attachment 3	CalSim 3 Flow Results
Attachment 4	CalSim 3 Diversion Results
Attachment 5	CalSim 3 X2 Results
Attachment 6	DSM2 Stage Results
Attachment 7	DSM2 Electrical Conductivity Results
Attachment 8	DSM2 Chloride Results
Appendix 4M	Old and Middle River Diversions Sensitivity Analysis
Appendix 5A1	Chloride (DEIR)
Appendix 5A2	Chloride (FEIR)
Appendix 5B1	Electrical Conductivity (DEIR)
Appendix 5B2	Electrical Conductivity (FEIR)
Appendix 5C	Proposed Project Surface Water Quality Effects with Early Spring Outflow Implementation
Appendix 6A	Environmental Setting Background Information
Appendix 6B	Biological Modeling Methods and Selected Results
Appendix 6C	SCHISM Model Results
Appendix 6D	Biological Results for Sensitivity Scenarios
Appendix 7A	Tribal Consultation and Engagement Log
Appendix 10A	Winter-Run Chinook Salmon Life Cycle Model Results for Proposed Action for the Long-Term Operation of the Central Valley Project and State Water Project

Tables

Table ES-1. Proposed Project Elements	7
Table ES-2. Summary of Impacts of the Proposed Project	11
Table 2-1. State Water Contractors	2-11
Table 2-2. SWP Settlement Agreements.....	2-12
Table 2-3. Summary of Proposed Project Elements for which Take is Sought	2-18
Table 2-4. Age 1+ Longfin Smelt Index Catch Threshold	2-26
Table 2-5. Historical (Water Years 2017–2021) Presence of Winter-Run Chinook Salmon Entering the Delta, Exiting the Delta, in the Delta and in the Delta Scaled to 100%.....	2-29
Table 2-6. Water Made Available by the SWP Under the Voluntary Agreements During Each Water Year Type	2-34
Table 2-7. Tidal Habitat Restoration	2-39
Table 2-8. Proposed Annual North to South (out of basin) Water Transfer Volume	2-41
Table 3-1. Model Scenarios Analyzed in the EIR and Major Assumptions of Each Scenario	3-8
Table 5-1. Designated Beneficial Uses for Waterbodies in the Potential Environmental Impact Area.....	5-3
Table 5-2. Clean Water Act Section 303(d) Listed Pollutants and Sources in the Delta, Suisun Bay, and Suisun Marsh.....	5-4
Table 5-3. Clean Water Act Section 303(d) Listed Pollutants and Sources for San Francisco Bay.....	5-5
Table 5-4. Water Quality Objectives for Chloride in the Water Quality Control Plan for the San Francisco Bay/Sacramento–San Joaquin Delta Estuary for Municipal and Industrial Beneficial Uses (in milligrams per liter)	5-7
Table 5-5. Water Quality Objectives for Electrical Conductivity in the Water Quality Control Plan for the San Francisco Bay/Sacramento–San Joaquin Delta Estuary for Agricultural Beneficial Uses (in micromhos per centimeter).....	5-7
Table 5-6. Water Quality Objectives for Electrical Conductivity in the Water Quality Control Plan for the San Francisco Bay/Sacramento–San Joaquin Delta Estuary for Fish and Wildlife Beneficial Uses (in micromhos per centimeter)	5-8
Table 5-7. Water Quality Objectives for Electrical Conductivity in the Water Quality Control Plan for the San Francisco Bay/Sacramento–San Joaquin Delta Estuary for Fish and Wildlife Beneficial Uses for Suisun Marsh (in millimhos per centimeter)	5-8
Table 5-8. Delta and Suisun Marsh Assessment Locations for Electrical Conductivity.....	5-13

Table 5-9. Delta Assessment Locations and Concentration Calculation Method for Chloride.....	5-14
Table 5-10. Monthly Average Electrical Conductivity (in micromhos per centimeter) at Delta Assessment Locations for the Full Simulation Period under the Proposed Project, and Difference from Baseline Conditions	5-17
Table 5-11. Percent of Days in Water Years 1922–2021 that Modeled Electrical Conductivity Exceeded the Agricultural Beneficial Uses Water Quality Objective, Baseline Conditions and the Proposed Project	5-21
Table 5-12. Percent of Days in Water Years 1922–2021 that Modeled Electrical Conductivity Exceeded the Fish and Wildlife Beneficial Uses Water Quality Objective, Baseline Conditions and the Proposed Project	5-21
Table 5-13. Monthly Average Chloride (in milligrams per liter) at Delta Assessment Locations for the Full Simulation Period under the Proposed Project and Difference from Baseline Conditions.....	5-22
Table 5-14. Percent of Days in Water Years 1922–2021 that Modeled Chloride Concentrations Exceeded the 250 Milligrams per Liter Municipal and Industrial Uses Water Quality Objective, Baseline Conditions and the Proposed Project.....	5-24
Table 5-15. Number of Years in Calendar Years 1922–2020 that Modeled Chloride Concentrations Exceeded the 150 Milligrams per Liter Chloride Objective for Contra Costa Pumping Plant #1, Baseline Conditions and the Proposed Project	5-25
Table 5-16. Monthly Average Electrical Conductivity (in micromhos per centimeter) at Suisun Marsh Assessment Locations for the Full Simulation Period under the Proposed Project and Difference from Baseline Conditions.....	5-29
Table 6-1. Fish and Aquatic Species of Management Concern Potentially Affected by the Proposed Project.....	6-2
Table 6-2. DWR and Reclamation Coordinated Monitoring Programs.....	6-21
Table 6-3. Experimental Releases of Delta Smelt, 2021–2024	6-21
Table 6-4. Percentage of Particles Entrained Over 30 Days into Clifton Court Forebay.....	6-48
Table 6-5. Percentage of Particles Entrained Over 30 Days into Barker Slough Pumping Plant	6-49
Table 6-6. Mean Predicted March–May Cladocerans (Except <i>Daphnia</i>) Catch per Cubic Meter in the Low Salinity Zone under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type	6-61

Table 6-7. Mean Predicted March–May *Eurytemora affinis* Adults Catch per Cubic Meter in the Low-Salinity Zone under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-63

Table 6-8. Mean Predicted March–May Harpacticoid Copepods Catch per Cubic Meter in the Low-Salinity Zone under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-65

Table 6-9. Mean Predicted March–May Other Calanoid Copepod Adults Catch per Cubic Meter in the Low-Salinity Zone under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-67

Table 6-10. Mean Predicted March–May Other Calanoid Copepod Copepodites Catch per Cubic Meter in the Low-Salinity Zone under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-69

Table 6-11. Mean Predicted September–November *Eurytemora affinis* Adults Catch per Cubic Meter in the Low-Salinity Zone under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-77

Table 6-12. Mean Predicted September–November Mysids Catch per Cubic Meter in the Low-Salinity Zone under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-79

Table 6-13. Median, Percentage Difference (Proposed Action minus Baseline Conditions), and Proportion of Posterior Distribution with Proposed Action Less than Baseline Conditions in Population Growth Rate from Delta Smelt LCME Modeling 6-99

Table 6-14. Percentage of Years with X2 Less than 85 km (Low-Salinity Zone within Honker Bay), June–December 6-102

Table 6-15. Entrainment Loss of Adult Longfin Smelt in Relation to December Population Abundance 6-116

Table 6-16. Mean Percentage of Neutrally Buoyant Particles Entrained Over 90 Days into Clifton Court Forebay and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-118

Table 6-17. Mean Percentage of Neutrally Buoyant Particles Entrained Over 90 Days into Barker Slough Pumping Plant and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-118

Table 6-18. Mean Percentage of Neutrally Buoyant Particles Passing Chipps Island Over 90 Days and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-119

Table 6-19. Mean Percentage of Surface-Oriented Particles Entrained Over 90 Days into Clifton Court Forebay and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-119

Table 6-20. Mean Percentage of Surface-Oriented Particles Entrained Over 90 Days into Barker Slough Pumping Plant and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-120

Table 6-21. Mean Percentage of Surface-Oriented Particles Passing Chipps Island Over 90 Days and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-120

Table 6-22. Mean Annual Longfin Smelt April–May Salvage, from the Regression Including Mean Old and Middle River Flows (Grimaldo et al. 2009a) and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped By Water Year Type 6-121

Table 6-23. Juvenile Longfin Smelt: Estimated Entrainment Loss Relative to Population Size, SWP South Delta Export Facility, 1995–2015 6-124

Table 6-24. Mean Percentage of Neutrally Buoyant Particles Entering the South Delta (via Big Break, Dutch Slough, False River, Fishermans Cut, Mouth of Old River, Mouth of Middle River, Columbia Cut, or Turner Cut) and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-125

Table 6-25. Mean Percentage of Surface-Oriented Particles Entering the South Delta (via Big Break, Dutch Slough, False River, Fishermans Cut, Mouth of Old River, Mouth of Middle River, Columbia Cut, or Turner Cut) and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type	6-125
Table 6-26. Mean Predicted Longfin Smelt Fall Midwater Trawl Index under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type	6-131
Table 6-27. Mean Predicted Longfin Smelt Bay Midwater Trawl Age-0 Index under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type	6-131
Table 6-28. Mean Predicted Longfin Smelt Bay Otter Trawl Age-0 Index under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type	6-131
Table 6-29. Mean Probability of Lower Longfin Smelt Fall Midwater Trawl Index under the Proposed Project Modeling Scenario than under the Baseline Conditions Modeling Scenario, Grouped by Water Year Type.....	6-132
Table 6-30. Mean Probability of Lower Longfin Smelt Bay Midwater Trawl Age-0 Index under the Proposed Project Modeling Scenario than under the Baseline Conditions Modeling Scenario, Grouped by Water Year Type	6-132
Table 6-31. Mean Probability of Lower Longfin Smelt Bay Otter Trawl Age-0 Index under the Proposed Project Modeling Scenario than under the Baseline Conditions Modeling Scenario, Grouped by Water Year Type.....	6-132
Table 6-32. Mean Modeled December–May Delta Outflow under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type	6-133
Table 6-33. Mean Number of Genetically Identified Winter-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method	6-155

Table 6-34. Mean Number of Coded Wire Tagged Winter-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 6-155

Table 6-35. Mean Annual Proportion of Juvenile Winter-run Chinook Salmon Entering the Delta Salvaged at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), from the Salvage Analysis Based on Zeug and Cavallo (2014) 6-156

Table 6-36. Mean Daily Proportion of Flow Entering Delta Junctions by Month and Water Year Type 6-179

Table 6-37. Delta Passage Model: Mean Winter-Run Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence (BAFF) Operation Assumption 6-194

Table 6-38. STARS: Mean September Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type..... 6-198

Table 6-39. STARS: Mean October Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-198

Table 6-40. STARS: Mean November Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 6-198

Table 6-41. STARS: Mean December Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 6-199

Table 6-42. STARS: Mean January Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 6-199

Table 6-43. STARS: Mean February Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 6-200

Table 6-44. STARS: Mean March Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 6-200

Table 6-45. STARS: Mean April Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 6-201

Table 6-46. STARS: Mean May Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 6-201

Table 6-47. STARS: Mean June Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 6-201

Table 6-48. STARS: Mean September Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project Being Less Than Baseline Conditions, Grouped by Water Year Type..... 6-202

Table 6-49. STARS: Mean October Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project Being Less Than Baseline Conditions, Grouped by Water Year Type 6-202

Table 6-50. STARS: Mean November Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project Being Less Than Baseline Conditions, Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence (BAFF) Operation Assumption..... 6-202

Table 6-51. STARS: Mean December Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project Being Less Than Baseline Conditions, Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence (BAFF) Operation Assumption..... 6-202

Table 6-52. STARS: Mean January Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project Being Less Than Baseline Conditions, Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence (BAFF) Operation Assumption..... 6-203

Table 6-53. STARS: Mean February Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project Being Less Than Baseline Conditions, Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence (BAFF) Operation Assumption..... 6-203

Table 6-54. STARS: Mean March Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project Being Less Than Baseline Conditions, Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence (BAFF) Operation Assumption..... 6-203

Table 6-55. STARS: Mean April Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project Being Less Than Baseline Conditions, Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence (BAFF) Operation Assumption..... 6-204

Table 6-56. STARS: Mean May Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project Being Less Than Baseline Conditions, Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence (BAFF) Operation Assumption..... 6-204

Table 6-57. STARS: Mean June Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project Being Less Than Baseline Conditions, Grouped by Water Year Type 6-204

Table 6-58. ECO-PTM: Mean September Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type..... 6-206

Table 6-59. ECO-PTM: Mean October Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type..... 6-206

Table 6-60. ECO-PTM: Mean November Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 6-206

Table 6-61. ECO-PTM: Mean December Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 6-207

Table 6-62. ECO-PTM: Mean January Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 6-207

Table 6-63. ECO-PTM: Mean February Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 6-208

Table 6-64. ECO-PTM: Mean March Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 6-208

Table 6-65. ECO-PTM: Mean April Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 6-209

Table 6-66. ECO-PTM: Mean May Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-209

Table 6-67. ECO-PTM: Mean June Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-209

Table 6-68. Mean Number of Genetically Identified Spring-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 6-216

Table 6-69. Mean Number of Coded Wire Tagged Spring-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 6-216

Table 6-70. Delta Passage Model: Mean Spring-Run Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence (BAFF) Operation Assumption 6-222

Table 6-71. Mean Predicted San Joaquin River Spring-Run Chinook Salmon Annual Proportional Through-Delta Survival under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-225

Table 6-72. Mean Predicted San Joaquin River Basin Fall-Run Chinook Salmon Adult Straying to the Sacramento River Basin under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-240

Table 6-73. Mean Number of Days of Delta Cross Channel Opening in October and November under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-242

Table 6-74. Mean Number of Fall-Run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 6-245

Table 6-75. Mean Number of Late-Fall-Run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 6-246

Table 6-76. Delta Passage Model: Mean Fall-Run Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence (BAFF) Operation Assumption..... 6-247

Table 6-77. Delta Passage Model: Mean Late Fall-Run Chinook Salmon Smolt Survival Through the Delta under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence (BAFF) Operation Assumption 6-250

Table 6-78. Mean Predicted San Joaquin River Fall-Run Chinook Salmon Juvenile Annual Proportional Through-Delta Survival under the Proposed Project and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 6-253

Table 6-79. Mean Number of Steelhead Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 6-259

Table 6-80. Mean Number of Green Sturgeon Juveniles Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 6-268

Table 6-81. Mean Number of White Sturgeon Juveniles Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method.....	6-273
Table 6-82. Mean Annual White Sturgeon Year Class Strength, from the Regression Including March–July Delta Outflow and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped By Water Year Type	6-274
Table 6-83. Mean Annual White Sturgeon Year Class Strength, from the Regression Including April–May Delta Outflow and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped By Water Year Type	6-276
Table 6-84. Mean Number of Lamprey Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method.....	6-281
Table 6-85. Mean Number of Sacramento Hitch Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method.....	6-285
Table 6-86. Mean Number of Hardhead Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method.....	6-286
Table 6-87. Mean Number of Central California Roach Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method.....	6-286
Table 6-88. Mean Number of Sacramento Splittail Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method.....	6-286

Table 6-89. Mean Number of Starry Flounder Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 6-290

Table 6-90. Mean Annual Starry Flounder Age 1+ Bay Study Otter Trawl Abundance Index, from the Regression Including March–June Delta Outflow and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped By Water Year Type 6-291

Table 6-91. Mean Number of Striped Bass Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 6-298

Table 6-92. Mean Annual Striped Bass Fall Midwater Trawl Abundance Index, from the Regression Including April–June Delta Outflow and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped By Water Year Type 6-298

Table 6-93. Mean Number of American Shad Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 6-303

Table 6-94. Mean Annual American Shad Fall Midwater Trawl Abundance Index, from the Regression Including February–June Delta Outflow and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped By Water Year Type 6-303

Table 6-95. Mean Number of Threadfin Shad Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 6-308

Table 6-96. Mean Number of Largemouth Bass Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 6-311

Table 6-97. Mean Number of Smallmouth Bass Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 6-311

Table 6-98. Mean Number of Spotted Bass Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 6-312

Table 6-99. California Bay Shrimp Catch Per 1,000 Square Meters Sampled by San Francisco Bay Study Otter Trawl, 2003–2022 6-315

Table 8-1. Minority Population Distribution within the Project Area, 2022..... 8-5

Table 8-2. Population below Poverty Level within the Project Region, 2022..... 8-6

Table 9-1. Comparison of Climate Change Chapter to Other Resource Chapters 9-3

Table 9-2. Climate Change Projections for the Study Area ^a 9-14

Table 9-3. CalSim 3 Model Simulations used to Analyze Climate Change Impact on Operations 9-21

Table 9-4. Exceedance Probability of X2 during September and October under Baseline Conditions and the Proposed Project under Current and Future Climate Assumptions..... 9-26

Table 9-5. Long-Term Average SWP Exports under Baseline Conditions and the Proposed Project under Current and Future Climate 9-26

Table 9-6. Old and Middle River Flows under Baseline Conditions and the Proposed Project under Current and Future Climate..... 9-31

Table 9-7. Delta Outflow under Baseline Conditions and the Proposed Project under Current and Future Climate 9-37

Table 9-8. Flows in the San Joaquin River at Vernalis under Baseline Conditions and the Proposed Project under Current and Future Climate 9-41

Table 9-9. Flows in the Sacramento River at Freeport under Baseline Conditions and the Proposed Project under current and future climate. 9-44

Table 10-1a. List of Cumulative Projects, Water Supply, Water Management, and Water Quality Projects and Actions 10-4

Table 10-1b. List of Cumulative Projects, Habitat Improvement Projects and Actions..... 10-9

Table 10-1c. List of Cumulative Projects, Fish Passage and Diversion Screening Projects and Actions 10-15

Table 10-1d. List of Cumulative Projects, Invasive Species Control Programs and Actions 10-16

Table 10-1e. List of Cumulative Projects, Area-Wide Plans and Programs..... 10-17

Table 10-2. Median, Percentage Difference (Proposed Project plus Cumulative minus Baseline Conditions), and Proportion of Posterior Distribution with Proposed Project plus Cumulative Less than Baseline Conditions in Population Growth Rate from Delta Smelt LCME Modeling..... 10-59

Table 10-3. Percentage of Years with X2 Less than 85 km (Low-Salinity Zone within Honker Bay) or Baseline Conditions and Proposed Project plus Cumulative Scenarios, June–December..... 10-63

Table 10-4. Mean Modeled December–May Delta Outflow (Cubic Feet per Second) under the Proposed Project plus Cumulative and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type..... 10-65

Table 10-5. Mean Predicted Longfin Smelt Fall Midwater Trawl Index under the Proposed Project plus Cumulative and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type..... 10-69

Table 10-6. Mean Predicted Longfin Smelt Bay Midwater Trawl Age-0 Index under the Proposed Project plus Cumulative and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type..... 10-69

Table 10-7. Mean Predicted Longfin Smelt Bay Otter Trawl Age-0 Index under the Proposed Project plus Cumulative and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type..... 10-69

Table 10-8. Mean Probability of Lower Longfin Smelt Fall Midwater Trawl Index under the Proposed Project plus Cumulative Modeling Scenario than under the Baseline Conditions Modeling Scenario, Grouped by Water Year Type 10-70

Table 10-9. Mean Probability of Lower Longfin Smelt Bay Midwater Trawl Age-0 Index under the Proposed Project plus Cumulative Modeling Scenario than under the Baseline Conditions Modeling Scenario, Grouped by Water Year Type 10-70

Table 10-10. Mean Probability of Lower Longfin Smelt Bay Otter Trawl Age-0 Index under the Proposed Project plus Cumulative Modeling Scenario than under the Baseline Conditions Modeling Scenario, Grouped by Water Year Type 10-70

Table 10-11. STARS: Mean September Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 10-82

Table 10-12. STARS: Mean October Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type..... 10-82

Table 10-13. STARS: Mean November Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 10-82

Table 10-14. STARS: Mean December Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 10-83

Table 10-15. STARS: Mean January Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 10-83

Table 10-16. STARS: Mean February Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 10-84

Table 10-17. STARS: Mean March Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 10-84

Table 10-18. STARS: Mean April Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 10-85

Table 10-19. STARS: Mean May Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 10-85

Table 10-20. STARS: Mean June Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence Operation Assumption 10-85

Table 10-21. STARS: Mean September Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative Being Less Than Baseline Conditions , Grouped by Water Year Type 10-86

Table 10-22. STARS: Mean October Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative Being Less Than Baseline Conditions , Grouped by Water Year Type 10-86

Table 10-23. STARS: Mean November Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative Being Less Than Baseline Conditions , Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence (BAFF) Operation Assumption..... 10-86

Table 10-24. STARS: Mean December Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative Being Less Than Baseline Conditions , Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence (BAFF) Operation Assumption..... 10-86

Table 10-25. STARS: Mean January Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative Being Less Than Baseline Conditions , Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence (BAFF) Operation Assumption..... 10-87

Table 10-26. STARS: Mean February Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative Being Less Than Baseline Conditions , Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence (BAFF) Operation Assumption..... 10-87

Table 10-27. STARS: Mean March Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative Being Less Than Baseline Conditions , Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence (BAFF) Operation Assumption..... 10-87

Table 10-28. STARS: Mean April Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative Being Less Than Baseline Conditions , Grouped by Water Year Type and Georgiana Slough Salmonid Migratory Barrier BioAcoustic Fish Fence (BAFF) Operation Assumption..... 10-88

Table 10-29. STARS: Mean May Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative Being Less Than Baseline Conditions , Grouped by Water Year Type 10-88

Table 10-30. STARS: Mean June Probability of Chinook Salmon Smolt Survival Through the Delta under the Proposed Project plus Cumulative Being Less Than Baseline Conditions , Grouped by Water Year Type 10-88

Table 10-31. Mean Number of Genetically Identified Winter-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-98

Table 10-32. Mean Number of Coded Wire Tagged Winter-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-98

Table 10-33. Mean Number of Genetically Identified Winter-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-98

Table 10-34. Mean Number of Coded Wire Tagged Winter-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-100

Table 10-35. Mean Number of Genetically Identified Winter-run Chinook Salmon Juveniles Lost (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 10-102

Table 10-36. Mean Number of Coded Wire Tagged Winter-run Chinook Salmon Juveniles Lost (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 10-102

Table 10-37. Mean Number of Genetically Identified Winter-run Chinook Salmon Juveniles Lost (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 10-102

Table 10-38. Mean Number of Coded Wire Tagged Winter-run Chinook Salmon Juveniles Lost (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 10-104

Table 10-39. Mean Number of Genetically Identified Spring-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-112

Table 10-40. Mean Number of Coded Wire Tagged Spring-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-112

Table 10-41. Mean Number of Genetically Identified Spring-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-113

Table 10-42. Mean Number of Coded Wire Tagged Spring-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-114

Table 10-43. Mean Number of Genetically Identified Spring-run Chinook Salmon Juveniles Lost (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 10-116

Table 10-44. Mean Number of Coded Wire Tagged Spring-run Chinook Salmon Juveniles Lost (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-116

Table 10-45. Mean Number of Genetically Identified Spring-run Chinook Salmon Juveniles Lost (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density..... 10-117

Table 10-46. Mean Number of Coded Wire Tagged Spring-run Chinook Salmon Juveniles Lost (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density 10-118

Table 10-47. Mean Number of Fall-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-121

Table 10-48. Mean Number of Fall-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-122

Table 10-49. Mean Number of Fall-run Chinook Salmon Juveniles Lost (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 10-123

Table 10-50. Mean Number of Fall-run Chinook Salmon Juveniles Lost (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-124

Table 10-51. Mean Number of Late-Fall-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-125

Table 10-52. Mean Number of Late-Fall-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-126

Table 10-53. Mean Number of Late-Fall-run Chinook Salmon Juveniles Lost (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 10-127

Table 10-54. Mean Number of Late-Fall-run Chinook Salmon Juveniles Lost (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-128

Table 10-55. Mean Number of Steelhead Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-129

Table 10-56. Mean Number of Steelhead Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports)..... 10-130

Table 10-57. Mean Number of Steelhead Lost (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-131

Table 10-58. Mean Number of Steelhead Lost (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-132

Table 10-59. Mean Number of Green Sturgeon Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-133

Table 10-60. Mean Number of Green Sturgeon Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports)..... 10-134

Table 10-61. Mean Number of Green Sturgeon Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-135

Table 10-62. Mean Number of Green Sturgeon Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-136

Table 10-63. Mean Number of White Sturgeon Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-137

Table 10-64. Mean Number of White Sturgeon Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports)..... 10-138

Table 10-65. Mean Number of White Sturgeon Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-139

Table 10-66. Mean Number of White Sturgeon Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-140

Table 10-67. Mean Number of Lamprey Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-141

Table 10-68. Mean Number of Lamprey Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports)..... 10-142

Table 10-69. Mean Number of Lamprey Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-143

Table 10-70. Mean Number of Lamprey Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-144

Table 10-71. Mean Number of Sacramento Hitch Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-145

Table 10-72. Mean Number of Sacramento Hitch Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports)..... 10-146

Table 10-73. Mean Number of Sacramento Hitch Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-147

Table 10-74. Mean Number of Sacramento Hitch Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 10-148

Table 10-75. Mean Number of Sacramento Splittail Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports)..... 10-149

Table 10-76. Mean Number of Sacramento Splittail Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-150

Table 10-77. Mean Number of Sacramento Splittail Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-151

Table 10-78. Mean Number of Sacramento Splittail Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 10-152

Table 10-79. Mean Number of Hardhead Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-153

Table 10-80. Mean Number of Hardhead Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports)..... 10-154

Table 10-81. Mean Number of Hardhead Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-155

Table 10-82. Mean Number of Hardhead Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-156

Table 10-83. Mean Number of Central California Roach Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports)..... 10-157

Table 10-84. Mean Number of Central California Roach Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-158

Table 10-85. Mean Number of Central California Roach Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 10-159

Table 10-86. Mean Number of Central California Roach Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-160

Table 10-87. Mean Number of Starry Flounder Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-161

Table 10-88. Mean Number of Starry Flounder Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports)..... 10-162

Table 10-89. Mean Number of Starry Flounder Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-163

Table 10-90. Mean Number of Starry Flounder Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-164

Table 10-91. Mean Number of Striped Bass Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-165

Table 10-92. Mean Number of Striped Bass Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports)..... 10-166

Table 10-93. Mean Number of Striped Bass Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-167

Table 10-94. Mean Number of Striped Bass Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-168

Table 10-95. Mean Number of American Shad Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-169

Table 10-96. Mean Number of American Shad Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports)..... 10-170

Table 10-97. Mean Number of American Shad Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-171

Table 10-98. Mean Number of American Shad Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-172

Table 10-99. Mean Number of Threadfin Shad Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-173

Table 10-100. Mean Number of Threadfin Shad Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports)..... 10-174

Table 10-101. Mean Number of Threadfin Shad Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-175

Table 10-102. Mean Number of Threadfin Shad Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-176

Table 10-103. Mean Number of Largemouth Bass Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-177

Table 10-104. Mean Number of Largemouth Bass Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports)..... 10-178

Table 10-105. Mean Number of Largemouth Bass Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-179

Table 10-106. Mean Number of Largemouth Bass Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 10-180

Table 10-107. Mean Number of Smallmouth Bass Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-181

Table 10-108. Mean Number of Smallmouth Bass Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports)..... 10-182

Table 10-109. Mean Number of Smallmouth Bass Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-183

Table 10-110. Mean Number of Smallmouth Bass Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 10-184

Table 10-111. Mean Number of Spotted Bass Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports) 10-185

Table 10-112. Mean Number of Spotted Bass Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method (Includes Banks SWP and Banks CVP Exports)..... 10-186

Table 10-113. Mean Number of Spotted Bass Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-187

Table 10-114. Mean Number of Spotted Bass Salvaged (Fish Per Year) at the Central Valley Project South Delta Export Facility for Baseline Conditions and Proposed Project plus Cumulative Scenarios Grouped by Water Year Type and Month, and Differences between the Scenarios (Proposed Project plus Cumulative minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 10-188

Table 11-1. Alternatives Considered but Not Analyzed Further 11-3

Table 11-2. CalSim-Modeled Average Electrical Conductivity (in micromhos/cm) for the Sacramento River at Emmaton by Water Year Type, Water Years 1922–2021, Alternative 1..... 11-22

Table 11-3. CalSim-Modeled Average Electrical Conductivity (in micromhos/cm) for the San Joaquin River at Jersey Point by Water Year Type, Water Years 1922–2021, Alternative 1..... 11-24

Table 11-4. CalSim-Modeled Average Electrical Conductivity (in micromhos/cm) for the Old River at Rock Slough by Water Year Type, Water Years 1922–2021, Alternative 1 11-26

Table 11-5. Mean Number of Genetically Identified Winter-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 11-31

Table 11-6. Mean Number of Coded Wire Tagged Winter-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 11-31

Table 11-7. Mean Number of Genetically Identified Spring-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 11-32

Table 11-8. Mean Number of Coded Wire Tagged Spring-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 11-32

Table 11-9. Mean Number of Fall-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 11-33

Table 11-10. Mean Number of Late-fall-run Chinook Salmon Juveniles Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method 11-33

Table 11-11. Mean Number of Steelhead Lost (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 11-34

Table 11-12. Mean Number of Green Sturgeon Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 11-34

Table 11-13. Mean Number of White Sturgeon Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 11-35

Table 11-14. Mean Number of Lamprey Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method.....	11-35
Table 11-15. Mean Number of Sacramento Hitch Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method.....	11-36
Table 11-16. Mean Number of Hardhead Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method.....	11-36
Table 11-17. Mean Number of Central California Roach Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method.....	11-37
Table 11-18. Mean Number of Sacramento Splittail Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method.....	11-37
Table 11-19. Mean Number of Starry Flounder Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method.....	11-38

Table 11-20. Mean Number of Striped Bass Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, and Alternative 2 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 11-38

Table 11-21. Mean Number of American Shad Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 11-39

Table 11-22. Mean Number of Threadfin Shad Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 11-39

Table 11-23. Mean Number of Largemouth Bass Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 11-40

Table 11-24. Mean Number of Smallmouth Bass Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 11-40

Table 11-25. Mean Number of Spotted Bass Salvaged (Fish Per Year) at the State Water Project South Delta Export Facility for Baseline Conditions, Proposed Project, Alternative 1, Alternative 2, and Alternative 3 Scenarios Grouped by Water Year Type, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Based on the Salvage-Density Method..... 11-41

Table 11-26. Mean Modeled March–May Delta Outflow under the Proposed Project, Alternative 1, Alternative 2, Alternative 3, and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type 11-42

Table 11-27. Mean Modeled March–June Delta Outflow under the Proposed Project, Alternative 1, Alternative 2, Alternative 3, and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type	11-44
Table 11-28. Mean Modeled February–June Delta Outflow under the Proposed Project, Alternative 1, Alternative 2, Alternative 3, and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type	11-46
Table 11-29. Mean Modeled April–June Delta Outflow under the Proposed Project, Alternative 1, Alternative 2, Alternative 3, and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type	11-48
Table 11-30. Mean Predicted Longfin Smelt Fall Midwater Trawl Index under the Proposed Project/Alternative 1/Alternative 2/Alternative 3 and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type	11-54
Table 11-31. Mean Predicted Longfin Smelt Bay Midwater Trawl Age-0 Index under the Proposed Project/Alternative 1/Alternative 2/Alternative 3 and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type.....	11-54
Table 11-32. Mean Predicted Longfin Smelt Bay Otter Trawl Age-0 Index under the Proposed Project/Alternative 1/Alternative 2/Alternative 3 and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type	11-55
Table 11-33. Delta Smelt LCME Modeling Results for Proposed Project/Alternative 1/Alternative 2/Alternative 3 compared to Baseline Conditions	11-57
Table 11-34. Mean Modeled January–May QWEST Flow (cfs) under the Proposed Project/Alternative 1/Alternative 2/Alternative 3 and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type	11-61

Table 11-35. Mean Modeled September–June Sacramento River at Freeport Flow (cfs) under the Proposed Project/Alternative 1/Alternative 2/Alternative 3 and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type..... 11-62

Table 11-36. Mean Modeled January–May San Joaquin River at Vernalis Flow (cfs) under the Proposed Project/Alternative 1/Alternative 2/Alternative 3 and Baseline Conditions Modeling Scenarios, and Differences between the Scenarios (Proposed Project/Alternative 1/Alternative 2/Alternative 3 minus Baseline Conditions) Expressed as a Percentage Difference (parentheses), Grouped by Water Year Type..... 11-65

Table 11-37. CalSim-Modeled Average Electrical Conductivity (in micromhos/cm) for the Sacramento River at Emmaton by Water Year Type, Alternative 2..... 11-77

Table 11-38. CalSim-Modeled Average Electrical Conductivity (in micromhos/cm) for the San Joaquin River at Jersey Point by Water Year Type, Water Years 1922–2021, Alternative 2..... 11-79

Table 11-39. CalSim-Modeled Average Electrical Conductivity (in micromhos/cm) for the Old River at Rock Slough by Water Year Type, Water Years 1922–2021, Alternative 2 11-81

Table 11-40. CalSim-Modeled Average Electrical Conductivity (in micromhos/cm) for the Sacramento River at Emmaton by Water Year Type, Alternative 3..... 11-107

Table 11-41. CalSim-Modeled Average Electrical Conductivity (in micromhos/cm) for the San Joaquin River at Jersey Point by Water Year Type, Water Years 1922–2021, Alternative 3..... 11-109

Table 11-42. CalSim-Modeled Average Electrical Conductivity (in micromhos/cm) for the Old River at Rock Slough by Water Year Type, Water Years 1922–2021, Alternative 3 11-111

Figures

Figure ES-1. Locations of Facilities Relevant to Proposed Project Operations in the Delta, Suisun Marsh, and Suisun Bay	ES-6
Figure 2-1. Locations of Facilities Relevant to Proposed Project Operations in the Delta, Suisun Marsh, and Suisun Bay	2-3
Figure 2-2. The 29 Water Purveyors Under Contract to Receive SWP Water Deliveries	2-10
Figure 2-3. Governance Structure for SWP Water Operations.....	2-59
Figure 4-1. Map of Tributaries that Enter the Yolo Bypass.....	4-3
Figure 4-2. Sacramento River at Freeport, Historical and Modeled Baseline Conditions Flow.....	4-5
Figure 4-3. Sacramento River at Freeport, Critical Year Historical and Modeled Baseline Conditions Flow	4-7
Figure 4-4. Total Delta Exports, Historical and Modeled Baseline Conditions	4-11
Figure 4-5. Total Delta Exports, Dry Year Historical and Modeled Baseline Conditions.....	4-13
Figure 4-6. Total Delta Exports, Critical Year Historical and Modeled Baseline Conditions	4-15
Figure 4-7. Annual Total SWP Deliveries, Historical and Modeled Baseline Conditions	4-17
Figure 4-8. Sacramento River at Freeport, Comparison between Long-term Monthly Average Baseline Conditions and Proposed Project Operations	4-20
Figure 4-9. Delta Outflow, Comparison between Long-term Monthly Average Baseline Conditions and Proposed Project Operations	4-22
Figure 4-10. Old and Middle River Flow, Comparison between Long-term Monthly Average Baseline Conditions and Proposed Project Operations	4-26
Figure 4-11. SWP Banks Pumping Plant Exports, Comparison between Long-term Monthly Average Baseline Conditions and Proposed Project Operations.....	4-29
Figure 6-1. Mean Modeled Old and Middle River Flow, December	6-39
Figure 6-2. Mean Modeled Old and Middle River Flow, January	6-40
Figure 6-3. Mean Modeled Old and Middle River Flow, February	6-41
Figure 6-4. Mean Modeled Old and Middle River Flow, March	6-42
Figure 6-5. Mean Modeled Old and Middle River Flow, April	6-44
Figure 6-6. Mean Modeled Old and Middle River Flow, May.....	6-45
Figure 6-7. Mean Modeled Old and Middle River Flow, June	6-46
Figure 6-8. Mean Modeled Flow Through Yolo Bypass, December.....	6-50

Figure 6-9. Mean Modeled Flow Through Yolo Bypass, January	6-51
Figure 6-10. Mean Modeled Flow Through Yolo Bypass, February	6-52
Figure 6-11. Mean Modeled Flow Through Yolo Bypass, March	6-53
Figure 6-12. Mean Modeled Flow Through Yolo Bypass, April	6-54
Figure 6-13. Mean Modeled Flow Through Yolo Bypass, May	6-55
Figure 6-14. Mean Modeled Delta Outflow, March–May	6-57
Figure 6-15. Mean Modeled Delta Outflow, March	6-58
Figure 6-16. Mean Modeled Delta Outflow, April	6-59
Figure 6-17. Mean Modeled Delta Outflow, May	6-60
Figure 6-18. Exceedance Plot of March–May Cladocerans (Except <i>Daphnia</i>) Catch per Cubic Meter in the Low-Salinity Zone 95% Prediction Interval, for the 1922–2021 Modeled Period	6-62
Figure 6-19. Exceedance Plot of March–May <i>Eurytemora affinis</i> Adults Catch per Cubic Meter in the Low-Salinity Zone 95% Prediction Interval, for the 1922–2021 Modeled Period	6-64
Figure 6-20. Exceedance Plot of March–May Harpacticoid Copepods Catch per Cubic Meter in the Low-Salinity Zone 95% Prediction Interval, for the 1922–2021 Modeled Period	6-66
Figure 6-21. Exceedance Plot of March–May Other Calanoid Copepod Adults Catch per Cubic Meter in the Low-Salinity Zone 95% Prediction Interval, for the 1922–2021 Modeled Period	6-68
Figure 6-22. Exceedance Plot of March–May Other Calanoid Copepod Copepodites Catch per Cubic Meter in the Low-Salinity Zone 95% Prediction Interval, for the 1922–2021 Modeled Period	6-70
Figure 6-23. Mean Modeled Delta Outflow, July–September	6-72
Figure 6-24. Mean Modeled Delta Outflow, July	6-73
Figure 6-25. Mean Modeled Delta Outflow, August	6-74
Figure 6-26. Mean Modeled Delta Outflow, September	6-75
Figure 6-27. Mean Modeled Delta Outflow, June	6-76
Figure 6-28. Exceedance Plot of September–November <i>Eurytemora affinis</i> Adults Catch per Cubic Meter in the Low-Salinity Zone 95% Prediction Interval, for the 1922–2021 Modeled Period	6-78
Figure 6-29. Exceedance Plot of September–November Mysids Catch per Cubic Meter in the Low-Salinity Zone 95% Prediction Interval, for the 1922–2021 Modeled Period	6-80
Figure 6-30. Mean Modeled Delta Outflow, September–November	6-81

Figure 6-31. Mean Modeled Delta Outflow, September	6-82
Figure 6-32. Mean Modeled Delta Outflow, October.....	6-83
Figure 6-33. Mean Modeled Delta Outflow, November.....	6-84
Figure 6-34. Sediment Rating Curve for the Sacramento River at Rio Vista, 1998–2002.....	6-85
Figure 6-35. Mean Modeled Sacramento River Flow at Rio Vista, December.....	6-86
Figure 6-36. Mean Modeled Sacramento River Flow at Rio Vista, January.....	6-87
Figure 6-37. Mean Modeled Sacramento River Flow at Rio Vista, February.....	6-88
Figure 6-38. Mean Modeled Sacramento River Flow at Rio Vista, March.....	6-89
Figure 6-39. Mean Modeled Sacramento River Flow at Rio Vista, April.....	6-90
Figure 6-40. Mean Modeled Sacramento River Flow at Rio Vista, May.....	6-91
Figure 6-41. Mean Modeled South Delta Exports, March–May.....	6-93
Figure 6-42. Mean Modeled Delta Inflow, June–September.....	6-94
Figure 6-43. Median Population Growth Rate (Lambda) from Delta Smelt LCME Modeling.....	6-98
Figure 6-44. Mean Modeled X2, September–November.....	6-101
Figure 6-45. Geographic Regions Used in SCHISM Analysis.....	6-103
Figure 6-46. Low-Salinity Area in 2010 from SCHISM Modeling.....	6-104
Figure 6-47. Low-Salinity Area in 2016 from SCHISM Modeling.....	6-105
Figure 6-48. Low-Salinity Area in 2020 from SCHISM Modeling.....	6-106
Figure 6-49. Plan View of BioAcoustic Fish Fence Excerpted from Engineering Drawings.....	6-110
Figure 6-50. Close-up Plan View of Downstream End of BioAcoustic Fish Fence Excerpted from Engineering Drawings.	6-111
Figure 6-51. Profile View of BioAcoustic Fish Fence Excerpted from Engineering Drawings.....	6-112
Figure 6-52. Exceedance Plot of Longfin Smelt April–May Salvage Prediction Interval, Based on the Analysis using the Salvage-Old and Middle River Flow Regression Developed by Grimaldo et al. (2009a)	6-122
Figure 6-53. Time Series Plot of 95% Posterior Distribution of the Longfin Smelt Fall Midwater Trawl Index from Application of the Delta Outflow-Abundance Index Method	6-128
Figure 6-54. Time Series Plot of 95% Posterior Distribution of the Longfin Smelt Bay Midwater Trawl Age-0 Index from Application of the Delta Outflow-Abundance Index Method.....	6-129

Figure 6-55. Time Series Plot of 95% Posterior Distribution of the Longfin Smelt Bay Otter Trawl Age-0 Index from Application of the Delta Outflow-Abundance Index Method	6-130
Figure 6-56. Mean Modeled Sacramento River Flow at Freeport, November	6-137
Figure 6-57. Mean Modeled Sacramento River Flow at Freeport, December.....	6-138
Figure 6-58. Mean Modeled Sacramento River Flow at Freeport, January	6-139
Figure 6-59. Mean Modeled Sacramento River Flow at Freeport, February.....	6-140
Figure 6-60. Mean Modeled Sacramento River Flow at Freeport, March.....	6-141
Figure 6-61. Mean Modeled Sacramento River Flow at Freeport, April.....	6-142
Figure 6-62. Mean Modeled Sacramento River Flow at Freeport, May	6-143
Figure 6-63. Mean Modeled Sacramento River Flow at Freeport, June.....	6-144
Figure 6-64. Mean Modeled SWP South Delta Exports, November	6-146
Figure 6-65. Mean Modeled SWP South Delta Exports, December	6-147
Figure 6-66. Mean Modeled SWP South Delta Exports, January.....	6-148
Figure 6-67. Mean Modeled SWP South Delta Exports, February.....	6-149
Figure 6-68. Mean Modeled SWP South Delta Exports, March.....	6-150
Figure 6-69. Mean Modeled SWP South Delta Exports, April.....	6-151
Figure 6-70. Mean Modeled SWP South Delta Exports, May	6-152
Figure 6-71. Mean Modeled SWP South Delta Exports, June.....	6-153
Figure 6-72. Exceedance Plot of Annual Proportion of Juvenile Winter-run Chinook Salmon Entering the Delta Salvaged at the State Water Project South Delta Export Facility for Baseline Conditions and Proposed Project Scenarios from the Salvage Analysis Based on Zeug and Cavallo (2014)	6-157
Figure 6-73. Velocity Density Distribution for Sacramento River at Freeport, September	6-159
Figure 6-74. Velocity Density Distribution for Sacramento River at Freeport, October	6-160
Figure 6-75. Velocity Density Distribution for Sacramento River at Freeport, November	6-161
Figure 6-76. Velocity Density Distribution for Sacramento River at Freeport, December	6-162
Figure 6-77. Velocity Density Distribution for Sacramento River at Freeport, January.....	6-163
Figure 6-78. Velocity Density Distribution for Sacramento River at Freeport, February	6-164
Figure 6-79. Velocity Density Distribution for Sacramento River at Freeport, March	6-165
Figure 6-80. Velocity Density Distribution for Sacramento River at Freeport, April	6-166
Figure 6-81. Velocity Density Distribution for Sacramento River at Freeport, May.....	6-167

Figure 6-82. Velocity Density Distribution for Sacramento River at Freeport, June.....	6-168
Figure 6-83. Velocity Density Distribution for Sacramento River at Walnut Grove, September.....	6-169
Figure 6-84. Velocity Density Distribution for Sacramento River at Walnut Grove, October	6-170
Figure 6-85. Velocity Density Distribution for Sacramento River at Walnut Grove, November	6-171
Figure 6-86. Velocity Density Distribution for Sacramento River at Walnut Grove, December.....	6-172
Figure 6-87. Velocity Density Distribution for Sacramento River at Walnut Grove, January	6-173
Figure 6-88. Velocity Density Distribution for Sacramento River at Walnut Grove, February.....	6-174
Figure 6-89. Velocity Density Distribution for Sacramento River at Walnut Grove, March	6-175
Figure 6-90. Velocity Density Distribution for Sacramento River at Walnut Grove, April.....	6-176
Figure 6-91. Velocity Density Distribution for Sacramento River at Walnut Grove, May	6-177
Figure 6-92. Velocity Density Distribution for Sacramento River at Walnut Grove, June	6-178
Figure 6-93. Delta Passage Model: Exceedance Plot of Winter-Run Chinook Salmon Through-Delta Survival 95% Predictions, for the 1922–2021 Modeled Period, Assuming BioAcoustic Fish Fence Reducing Entry into Georgiana Slough by 50%.	6-195
Figure 6-94. Delta Passage Model: Exceedance Plot of Winter-Run Chinook Salmon Through-Delta Survival 95% Predictions, for the 1922–2021 Modeled Period, Assuming BioAcoustic Fish Fence Reducing Entry into Georgiana Slough by 67%.	6-196
Figure 6-95. Velocity Density Distribution for Old River near Head of Old River, April.....	6-218
Figure 6-96. Velocity Density Distribution for Old River near Head of Old River, May	6-219
Figure 6-97. Velocity Density Distribution for Old River Downstream of the South Delta Export Facilities, April	6-220
Figure 6-98. Velocity Density Distribution for Old River Downstream of the South Delta Export Facilities, May.....	6-221
Figure 6-99. Delta Passage Model: Exceedance Plot of Spring-Run Chinook Salmon Through-Delta Survival 95% Predictions, for the 1922–2021 Modeled Period, Assuming BioAcoustic Fish Fence Reducing Entry into Georgiana Slough by 50%	6-223
Figure 6-100. Delta Passage Model: Exceedance Plot of Spring-Run Chinook Salmon Through-Delta Survival 95% Predictions, for the 1922–2021 Modeled Period, Assuming BioAcoustic Fish Fence Reducing Entry into Georgiana Slough by 67%	6-224
Figure 6-101. Exceedance Plot of San Joaquin River Spring-Run Chinook Salmon Annual Proportional Through-Delta Survival under the Proposed Project and Baseline Conditions Modeling Scenarios, for the 1922–2021 Modeled Period	6-226
Figure 6-102. Mean Modeled Sacramento River Flow at Freeport, July	6-231
Figure 6-103. Mean Modeled Sacramento River Flow at Freeport, August	6-232

Figure 6-104. Mean Modeled Sacramento River Flow at Freeport, September	6-233
Figure 6-105. Mean Modeled Sacramento River Flow at Freeport, October	6-234
Figure 6-106. Mean Modeled SWP South Delta Exports, July	6-236
Figure 6-107. Mean Modeled SWP South Delta Exports, August	6-237
Figure 6-108. Mean Modeled SWP South Delta Exports, September	6-238
Figure 6-109. Mean Modeled SWP South Delta Exports, October	6-239
Figure 6-110. Exceedance Plot of San Joaquin River Basin Fall-Run Chinook Salmon Adult Straying to the Sacramento River Basin under the Proposed Project and Baseline Conditions Modeling Scenarios, for the 1922–2021 Modeled Period	6-241
Figure 6-111. Number of Days of Delta Cross Channel Opening, October	6-243
Figure 6-112. Number of Days of Delta Cross Channel Opening, November	6-244
Figure 6-113. Delta Passage Model: Exceedance Plot of Fall-Run Chinook Salmon Smolt Through-Delta Survival 95% Predictions, for the 1922–2021 Modeled Period, Assuming BioAcoustic Fish Fence Reducing Entry into Georgiana Slough by 50%.....	6-248
Figure 6-114. Delta Passage Model: Exceedance Plot of Fall-Run Chinook Salmon Smolt Through-Delta Survival 95% Predictions, for the 1922–2021 Modeled Period, Assuming BioAcoustic Fish Fence Reducing Entry into Georgiana Slough by 67%.....	6-249
Figure 6-115. Delta Passage Model: Exceedance Plot of Late Fall-Run Chinook Salmon Smolt Through-Delta Survival 95% Predictions, for the 1922–2021 Modeled Period, Assuming BioAcoustic Fish Fence Reducing Entry into Georgiana Slough by 50%.....	6-251
Figure 6-116. Delta Passage Model: Exceedance Plot of Late Fall-Run Chinook Salmon Smolt Through-Delta Survival 95% Predictions, for the 1922–2021 Modeled Period, Assuming BioAcoustic Fish Fence Reducing Entry into Georgiana Slough by 67%.....	6-252
Figure 6-117. Exceedance Plot of San Joaquin River Fall-Run Chinook Salmon Juvenile Annual Proportional Through-Delta Survival under the Proposed Project and Baseline Conditions Modeling Scenarios, for the 1922–2021 Modeled Period	6-254
Figure 6-118. Mean Modeled San Joaquin River Flow at Vernalis, February	6-261
Figure 6-119. Mean Modeled San Joaquin River Flow at Vernalis, March	6-262
Figure 6-120. Mean Modeled San Joaquin River Flow at Vernalis, April	6-263
Figure 6-121. Mean Modeled San Joaquin River Flow at Vernalis, May	6-264
Figure 6-122. Exceedance Plot of White Sturgeon Year Class Strength Prediction Interval, Based on the Regression Including March–July Delta Outflow	6-275
Figure 6-123. Exceedance Plot of White Sturgeon Year Class Strength Prediction Interval, Based on the Regression Including April–May Delta Outflow	6-277

Figure 6-124. Exceedance Plot of Starry Flounder Age 1+ Bay Study Otter Trawl Abundance Index, Based on the Regression Including March–June Delta Outflow 6-292

Figure 6-125. Exceedance Plot of Striped Bass Fall Midwater Trawl Abundance Index, Based on the Regression Including April–June Delta Outflow 6-299

Figure 6-126. Exceedance Plot of American Shad Fall Midwater Trawl Abundance Index, Based on the Regression Including February–June Delta Outflow..... 6-304

Figure 9-1. Exceedance Probability Showing the Location of the X2 for September and October in Current Climate (a) and Projected Climate (b) Scenarios Relative to Existing Operations and Climate Conditions..... 9-25

Figure 9-2. State Water Project Exports under Current Conditions and Future Climate Change Conditions. Flows under climate change are shown as flows with operational changes described under the Proposed Project (Project) and with no operational changes (Baseline). 9-28

Figure 9-3. Climate Change Impact on State Water Project Exports are shown for the Future Climate Scenario for both Baseline and Proposed Project Operations, Relative to Existing Operations and Climate Conditions..... 9-30

Figure 9-4. Old and Middle River Flows under Current Conditions and under Future Climate Change Conditions. Flows under climate change are shown as flows with operational changes described in the Project (Project) and with no operational changes (Baseline). 9-34

Figure 9-5. Old and Middle River Flows are Shown for the Future Climate Scenario for both Baseline and Proposed Project Operations Relative to Existing Operations and Climate Conditions..... 9-36

Figure 9-6. Delta Flows under Current Conditions and under Future Climate Change Conditions. Flows under climate change are shown as flows with operational changes described in the Project (Project) and with no operational changes (Baseline). 9-38

Figure 9-7. Climate Change Impact on Delta Outflows are Shown for the Future Climate Scenario for both Baseline and Proposed Project Operations relative to Existing Operations and Climate Conditions 9-40

Figure 9-8. San Joaquin River flows at Vernalis under Current Conditions and Future Climate Change Conditions. Flows under climate change are shown as flows with operational changes described in the Project (Project) and with no operational changes (Baseline). 9-42

Figure 9-9. Climate Change Impact on San Joaquin River flows at Vernalis for the Future Climate Scenario for both Baseline and Proposed Project Operations Relative to Existing Operations and Climate Conditions..... 9-43

Figure 9-10. Sacramento River flows at Freeport under Current Conditions and Future Climate Change Conditions. Flows under climate change are shown as flows with operational changes described in the Project (Project) and with no operational changes (Baseline). 9-45

Figure 9-11. Climate Change Impact on Sacramento River flows at Freeport for the Future Climate Scenario for both Baseline and Proposed Project Operations Relative to Existing Operations and Climate Conditions..... 9-46

Figure 10-1. Mean Modeled Old and Middle River Flow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, December 10-28

Figure 10-2. Mean Modeled Old and Middle River Flow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, January 10-29

Figure 10-3. Mean Modeled Old and Middle River Flow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, February 10-30

Figure 10-4. Mean Modeled Old and Middle River Flow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, March 10-31

Figure 10-5. Mean Modeled Old and Middle River Flow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, April 10-33

Figure 10-6. Mean Modeled Old and Middle River Flow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, May 10-34

Figure 10-7. Mean Modeled Old and Middle River Flow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, June 10-35

Figure 10-8. Mean Modeled Flow Through Yolo Bypass for Baseline Conditions and Proposed Project plus Cumulative Scenarios, December 10-37

Figure 10-9. Mean Modeled Flow Through Yolo Bypass for Baseline Conditions and Proposed Project plus Cumulative Scenarios, January 10-38

Figure 10-10. Mean Modeled Flow Through Yolo Bypass for Baseline Conditions and Proposed Project plus Cumulative Scenarios, February 10-39

Figure 10-11. Mean Modeled Flow Through Yolo Bypass for Baseline Conditions and Proposed Project plus Cumulative Scenarios, March 10-40

Figure 10-12. Mean Modeled Flow Through Yolo Bypass for Baseline Conditions and Proposed Project plus Cumulative Scenarios, April 10-41

Figure 10-13. Mean Modeled Flow Through Yolo Bypass for Baseline Conditions and Proposed Project plus Cumulative Scenarios, May 10-42

Figure 10-14. Mean Modeled Delta Outflow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, March–May..... 10-43

Figure 10-15. Mean Modeled Delta Outflow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, March..... 10-44

Figure 10-16. Mean Modeled Delta Outflow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, April..... 10-45

Figure 10-17. Mean Modeled Delta Outflow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, May 10-46

Figure 10-18. Mean Modeled Delta Outflow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, June 10-47

Figure 10-19. Mean Modeled Delta Outflow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, July 10-48

Figure 10-20. Mean Modeled Delta Outflow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, August 10-49

Figure 10-21. Mean Modeled Delta Outflow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, September 10-50

Figure 10-22. Mean Modeled Delta Outflow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, October 10-51

Figure 10-23. Mean Modeled Delta Outflow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, November 10-52

Figure 10-24. Mean Modeled Delta Outflow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, July–September 10-53

Figure 10-25. Mean Modeled South Delta Exports for Baseline Conditions and Proposed Project plus Cumulative Scenarios, March–May 10-55

Figure 10-26. Mean Modeled Sacramento River Flow at Freeport for Baseline Conditions and Proposed Project plus Cumulative Scenarios, June–September 10-56

Figure 10-27. Median Population Growth Rate (Lambda) from Delta Smelt LCME Modeling for Baseline Conditions and Proposed Project plus Cumulative Scenarios 10-58

Figure 10-28. Mean Modeled Delta Outflow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, June–August..... 10-60

Figure 10-29. Mean X2 for Baseline Conditions and Proposed Project plus Cumulative Scenarios, September–November 10-62

Figure 10-30. Mean Modeled Delta Outflow for Baseline Conditions and Proposed Project plus Cumulative Scenarios, December–May 10-64

Figure 10-31. Time Series Plot of 95% Posterior Distribution of the Longfin Smelt Fall Midwater Trawl Index from Application of the Delta Outflow-Abundance Index Method for Baseline Conditions and Proposed Project plus Cumulative Scenarios 10-66

Figure 10-32. Time Series Plot of 95% Posterior Distribution of the Longfin Smelt Bay Midwater Trawl Age-0 Index from Application of the Delta Outflow-Abundance Index Method for Baseline Conditions and Proposed Project plus Cumulative Scenarios 10-67

Figure 10-33. Time Series Plot of 95% Posterior Distribution of the Longfin Smelt Bay Otter Trawl Age-0 Index from Application of the Delta Outflow-Abundance Index Method for Baseline Conditions and Proposed Project plus Cumulative Scenarios 10-68

Figure 10-34. Mean Modeled Sacramento River Flow at Freeport for Baseline Conditions and Proposed Project plus Cumulative Scenarios, September 10-72

Figure 10-35. Mean Modeled Sacramento River Flow at Freeport for Baseline Conditions and Proposed Project plus Cumulative Scenarios, October 10-73

Figure 10-36. Mean Modeled Sacramento River Flow at Freeport for Baseline Conditions and Proposed Project plus Cumulative Scenarios, November 10-74

Figure 10-37. Mean Modeled Sacramento River Flow at Freeport for Baseline Conditions and Proposed Project plus Cumulative Scenarios, December 10-75

Figure 10-38. Mean Modeled Sacramento River Flow at Freeport for Baseline Conditions and Proposed Project plus Cumulative Scenarios, January 10-76

Figure 10-39. Mean Modeled Sacramento River Flow at Freeport for Baseline Conditions and Proposed Project plus Cumulative Scenarios, February 10-77

Figure 10-40. Mean Modeled Sacramento River Flow at Freeport for Baseline Conditions and Proposed Project plus Cumulative Scenarios, March 10-78

Figure 10-41. Mean Modeled Sacramento River Flow at Freeport for Baseline Conditions and Proposed Project plus Cumulative Scenarios, April 10-79

Figure 10-42. Mean Modeled Sacramento River Flow at Freeport for Baseline Conditions and Proposed Project plus Cumulative Scenarios, May 10-80

Figure 10-43. Mean Modeled Sacramento River Flow at Freeport for Baseline Conditions and Proposed Project plus Cumulative Scenarios, June 10-81

Figure 10-44. Mean Modeled South Delta Exports for Baseline Conditions and Proposed Project plus Cumulative Scenarios, November 10-90

Figure 10-45. Mean Modeled South Delta Exports for Baseline Conditions and Proposed Project plus Cumulative Scenarios, December 10-91

Figure 10-46. Mean Modeled South Delta Exports for Baseline Conditions and Proposed Project plus Cumulative Scenarios, January 10-92

Figure 10-47. Mean Modeled South Delta Exports for Baseline Conditions and Proposed Project plus Cumulative Scenarios, February 10-93

Figure 10-48. Mean Modeled South Delta Exports for Baseline Conditions and Proposed Project plus Cumulative Scenarios, March 10-94

Figure 10-49. Mean Modeled South Delta Exports for Baseline Conditions and Proposed Project plus Cumulative Scenarios, April 10-95

Figure 10-50. Mean Modeled South Delta Exports for Baseline Conditions and Proposed Project plus Cumulative Scenarios, May 10-96

Figure 10-51. Mean Modeled South Delta Exports for Baseline Conditions and Proposed Project plus Cumulative Scenarios, June 10-97

Figure 10-52. Mean Modeled San Joaquin River Flow at Vernalis for Baseline Conditions and Proposed Project plus Cumulative Scenarios, March 10-108

Figure 10-53. Mean Modeled San Joaquin River Flow at Vernalis for Baseline Conditions and Proposed Project plus Cumulative Scenarios, April 10-109

Figure 10-54. Mean Modeled San Joaquin River Flow at Vernalis for Baseline Conditions and Proposed Project plus Cumulative Scenarios, May 10-110

Figure 10-55. Mean Modeled San Joaquin River Flow at Vernalis for Baseline Conditions and Proposed Project plus Cumulative Scenarios, June 10-111

Figure 11-1. Sacramento River at Freeport Monthly Long-term Average Flow for the Baseline Conditions, Proposed Project, and Alternative 1 11-9

Figure 11-2. Monthly Long-term Average Yolo Bypass Flow for the Baseline Conditions, Proposed Project, and Alternative 1 11-10

Figure 11-3. Monthly Long-term Average Georgiana Slough Flow for the Baseline Conditions, Proposed Project, and Alternative 1 11-11

Figure 11-4. Monthly Long-term Average Delta Cross Channel Flow for the Baseline Conditions, Proposed Project, and Alternative 1 11-12

Figure 11-5. Monthly Long-term Average Qwest Flow for the Baseline Conditions, Proposed Project, and Alternative 1 11-13

Figure 11-6. Monthly Long-term Average Delta Outflow for the Baseline Conditions, Proposed Project, and Alternative 1 11-14

Figure 11-7. Combined Old and Middle River Monthly Long-term Average Flow for the Baseline Conditions, Proposed Project, and Alternative 1 11-15

Figure 11-8. Monthly Long-term Average Delta Exports for the Baseline Conditions, Proposed Project, and Alternative 1 11-16

Figure 11-9. December Delta Exports for the Baseline Conditions, Proposed Project, and Alternative 1 11-17

Figure 11-10. January Delta Exports for the Baseline Conditions, Proposed Project, and Alternative 1.....	11-18
Figure 11-11. February Delta Exports for the Baseline Conditions, Proposed Project, and Alternative 1.....	11-19
Figure 11-12. March Delta Exports for the Baseline Conditions, Proposed Project, and Alternative 1.....	11-20
Figure 11-13. Annual Delta Exports for the Baseline Conditions, Proposed Project, and Alternative 1.....	11-21
Figure 11-14. CalSim-modeled Monthly Average Electrical Conductivity (in micromhos/cm) for the Sacramento River at Emmaton, Water Years 1922–2021, Alternative 1.....	11-23
Figure 11-15. CalSim-modeled Monthly Average Electrical Conductivity (in micromhos/cm) for the San Joaquin River at Jersey Point, Water Years 1922–2021, Alternative 1	11-25
Figure 11-16. CalSim-modeled Monthly Average Electrical Conductivity (in micromhos/cm) for Old River at Rock Slough, Water Years 1922–2021, Alternative 1.....	11-27
Figure 11-17. Mean Modeled SWP South Delta Exports (Baseline Conditions, Proposed Project, and Alternative 1), December	11-29
Figure 11-18. Mean Modeled SWP South Delta Exports (Baseline Conditions, Proposed Project, and Alternative 1), March.....	11-30
Figure 11-19. Mean Modeled March–May Delta Outflow for Baseline Conditions, Proposed Project, and Alternative 1	11-43
Figure 11-20. Mean Modeled March–June Delta Outflow for Baseline Conditions, Proposed Project, and Alternative 1	11-45
Figure 11-21. Mean Modeled February–June Delta Outflow for Baseline Conditions, Proposed Project, and Alternative 1.....	11-47
Figure 11-22. Mean Modeled April–June Delta Outflow for Baseline Conditions, Proposed Project, and Alternative 1	11-49
Figure 11-23. Time Series Plot of 95% Posterior Distribution of the Longfin Smelt Fall Midwater Trawl Index from Application of the Delta Outflow-Abundance Index Method for Alternative 1 and Baseline Conditions Scenarios	11-51
Figure 11-24. Time Series Plot of 95% Posterior Distribution of the Longfin Smelt Bay Midwater Trawl Age-0 Index from Application of the Delta Outflow-Abundance Index Method for Alternative 1 and Baseline Conditions Scenarios	11-52
Figure 11-25. Time Series Plot of 95% Posterior Distribution of the Longfin Smelt Bay Otter Trawl Age-0 Index from Application of the Delta Outflow-Abundance Index Method for Alternative 1 and Baseline Conditions Scenarios.....	11-53

Figure 11-26. Median Population Growth Rate (Lambda) from Delta Smelt LCME Modeling for Baseline Conditions and Alternative 1	11-60
Figure 11-27. Sacramento River at Freeport Monthly Long-term Average Flow for the Baseline Conditions, Proposed Project, and Alternative 2	11-68
Figure 11-28. Monthly Long-term Average Yolo Bypass Flow for the Baseline Conditions, Proposed Project, and Alternative 2	11-69
Figure 11-29. Monthly Long-term Average Georgiana Slough Flow for the Baseline Conditions, Proposed Project, and Alternative 2	11-70
Figure 11-30. Monthly Long-term Average Delta Cross Channel Flow for the Baseline Conditions, Proposed Project, and Alternative 2	11-71
Figure 11-31. Monthly Long-term Average Qwest Flow for the Baseline Conditions, Proposed Project, and Alternative 2	11-72
Figure 11-32. Monthly Long-term Average Delta Outflow for the Baseline Conditions, Proposed Project, and Alternative 2	11-73
Figure 11-33. Combined Old and Middle River Monthly Long-term Average Flow for the Baseline Conditions, Proposed Project, and Alternative 2	11-74
Figure 11-34. Monthly Long-term Average Delta Exports for the Baseline Conditions, Proposed Project, and Alternative 2	11-75
Figure 11-35. Annual Delta Exports for the Baseline Conditions, Proposed Project, and Alternative 2	11-76
Figure 11-36. CalSim-modeled Monthly Average Electrical Conductivity (in micromhos/cm) for the Sacramento River at Emmaton, Water Years 1922–2021, Alternative 2	11-78
Figure 11-37. CalSim-modeled Monthly Average Electrical Conductivity (in micromhos/cm) for the San Joaquin River at Jersey Point, Water Years 1922–2021, Alternative 2	11-80
Figure 11-38. CalSim-modeled Monthly Average Electrical Conductivity (in micromhos/cm) for Old River at Rock Slough, Water Years 1922–2021, Alternative 2	11-82
Figure 11-39. Mean Modeled SWP South Delta Exports (Baseline Conditions, Proposed Project, and Alternative 2), December	11-84
Figure 11-40. Mean Modeled SWP South Delta Exports (Baseline Conditions, Proposed Project, and Alternative 2), March	11-85
Figure 11-41. Time Series Plot of 95% Posterior Distribution of the Longfin Smelt Fall Midwater Trawl Index from Application of the Delta Outflow-Abundance Index Method for Alternative 2 and Baseline Conditions (BC) Scenarios	11-86
Figure 11-42. Time Series Plot of 95% Posterior Distribution of the Longfin Smelt Bay Midwater Trawl Age-0 Index from Application of the Delta Outflow-Abundance Index Method for Alternative 2 and Baseline Conditions (BC) Scenarios	11-87

Figure 11-43. Time Series Plot of 95% Posterior Distribution of the Longfin Smelt Bay Otter Trawl Age-0 Index from Application of the Delta Outflow-Abundance Index Method for Alternative 2 and Baseline Conditions (BC) Scenarios 11-88

Figure 11-44. Median Population Growth Rate (Lambda) from Delta Smelt LCME Modeling for Baseline Conditions and Alternative 2 11-90

Figure 11-45. Sacramento River at Freeport Monthly Long-term Average Flow for the Baseline Conditions, Proposed Project, and Alternative 3 11-93

Figure 11-46. Monthly Long-term Average Yolo Bypass Flow for the Baseline Conditions, Proposed Project, and Alternative 3 11-94

Figure 11-47. Monthly Long-term Average Georgiana Slough Flow for the Baseline Conditions, Proposed Project, and Alternative 3 11-95

Figure 11-48. Monthly Long-term Average Delta Cross Channel Flow for the Baseline Conditions, Proposed Project, and Alternative 3 11-96

Figure 11-49. Monthly Long-term Average Qwest Flow for the Baseline Conditions, Proposed Project, and Alternative 3 11-97

Figure 11-50. Monthly Long-term Average Delta Outflow for the Baseline Conditions, Proposed Project, and Alternative 3 11-98

Figure 11-51. Combined Old and Middle River Monthly Long-term Average Flow for the Baseline Conditions, Proposed Project, and Alternative 3 11-99

Figure 11-52. Monthly Long-term Average Delta Exports for the Baseline Conditions, Proposed Project, and Alternative 3 11-100

Figure 11-53. December Delta Exports for the Baseline Conditions, Proposed Project, and Alternative 3 11-101

Figure 11-54. January Delta Exports for the Baseline Conditions, Proposed Project, and Alternative 3 11-102

Figure 11-55. February Delta Exports for the Baseline Conditions, Proposed Project, and Alternative 3 11-103

Figure 11-56. March Delta Exports for the Baseline Conditions, Proposed Project, and Alternative 3 11-104

Figure 11-57. Annual Delta Exports for the Baseline Conditions, Proposed Project, and Alternative 3 11-105

Figure 11-58. CalSim-modeled Monthly Average Electrical Conductivity (in micromhos/cm) for the Sacramento River at Emmaton, Water Years 1922–2021, Alternative 3 11-108

Figure 11-59. CalSim-modeled Monthly Average Electrical Conductivity (in micromhos/cm) for the San Joaquin River at Jersey Point, Water Years 1922–2021, Alternative 3 11-110

Figure 11-60. CalSim-modeled Monthly Average Electrical Conductivity (in micromhos/cm) for Old River at Rock Slough, Water Years 1922–2021, Alternative 3	11-112
Figure 11-61. Mean Modeled March–May Delta Outflow for Baseline Conditions, Proposed Project, and Alternative 3	11-114
Figure 11-62. Mean Modeled March–June Delta Outflow for Baseline Conditions, Proposed Project, and Alternative 3	11-115
Figure 11-63. Mean Modeled February–June Delta Outflow for Baseline Conditions, Proposed Project, and Alternative 3	11-116
Figure 11-64. Mean Modeled April–June Delta Outflow for Baseline Conditions, Proposed Project, and Alternative 3	11-117
Figure 11-65. Mean Modeled SWP South Delta Exports (Baseline Conditions, Proposed Project, and Alternative 3), December	11-118
Figure 11-66. Mean Modeled SWP South Delta Exports (Baseline Conditions, Proposed Project, and Alternative 3), March.....	11-119
Figure 11-67. Time Series Plot of 95% Posterior Distribution of the Longfin Smelt Fall Midwater Trawl Index from Application of the Delta Outflow-Abundance Index Method for Alternative 3 and Baseline Conditions (BC) Scenarios	11-120
Figure 11-68. Time Series Plot of 95% Posterior Distribution of the Longfin Smelt Bay Midwater Trawl Age-0 Index from Application of the Delta Outflow-Abundance Index Method for Alternative 3 and Baseline Conditions (BC) Scenarios.....	11-121
Figure 11-69. Time Series Plot of 95% Posterior Distribution of the Longfin Smelt Bay Otter Trawl Age-0 Index from Application of the Delta Outflow-Abundance Index Method for Alternative 3 and Baseline Conditions (BC) Scenarios	11-122
Figure 11-70. Median Population Growth Rate (Lambda) from Delta Smelt LCME Modeling for Baseline Conditions and Alternative 3	11-124

Acronyms and Abbreviations

Term	Definition
°C	degrees Celsius
°F	degrees Fahrenheit
µg/L	micrograms per liter
µmhos/cm	micromhos per centimeter
AB	Assembly Bill
af	acre-feet
ARIS	Adaptive Resolution Imaging Sonar
BAFF	BioAcoustic Fish Fence
Banks Pumping Plant	Harvey O. Banks Pumping Plant
BiOp	biological opinion
BSPP	Barker Slough Pumping Plant
CALFED	CALFED Bay-Delta Program
CASCaDE	Computational Assessments of Scenarios of Change for the Delta Ecosystem
CCF	Clifton Court Forebay
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
cfs	cubic feet per second
CGC	California Government Code
CHAB	cyanobacteria harmful algae bloom
CMIP5	Coupled Model Intercomparison Project Phase 5
CNRA	California Natural Resources Agency
COA	Coordinated Operation Agreement
CRHR	California Register of Historical Resources
CSAMP	Collaborative Science and Adaptive Management Program
CSD	Community Services District
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
CWA	Clean Water Act
CWC	California Water Code
CWC	California Water Commission
D-1485	State Water Board Water Right Decision 1485
D-1641	State Water Board Water Right Decision 1641
DCC	Delta Cross Channel

Term	Definition
DCD	Delta Channel Depletion
DCP	Delta Conveyance Project
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DEIR	Draft Environmental Impact Report
Delta	Sacramento–San Joaquin Delta
Delta Reform Act	Sacramento–San Joaquin Delta Reform Act of 2009
DICU	Delta Island Consumptive Use
DO	dissolved oxygen
DPM	Delta Passage Model
DPS	distinct population segment
Draft SEIR	draft supplemental environmental impact report
DSM2	Delta Simulation Model II
DWR	California Department of Water Resources
E:I	export/inflow
EC	electrical conductivity
ECO-PTM	Ecological Particle Tracking Modeling
EDSM	Enhanced Delta Smelt Monitoring
EFH	essential fish habitat
EIR	Environmental Impact Report
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESU	evolutionarily significant unit
FCCL	Fish Conservation and Culture Laboratory
FFGS	Floating Fish Guidance Structure
FMWT	fall midwater trawl
FR	<i>Federal Register</i>
GHG	greenhouse gas
HRLP	Healthy Rivers and Landscapes Program
I:E	inflow to exports
IEP	Interagency Ecological Program
IEP MAST	Interagency Ecological Program Management, Analysis, and Synthesis Team
IEUA	Inland Empire Utilities Agency
IPCC	Intergovernmental Panel on Climate Change
ITP	Incidental Take Permit
JPA	Joint Powers Authority
LCME	Life Cycle Model with Entrainment
LMP	Land Management Plan
LSIWA	Lower Sherman Island Wildlife Area
maf	million acre-feet

Term	Definition
mg/L	milligrams per liter
MIDS	Morrow Island Distribution System
mm	millimeter
mmhos/cm	millimhos per centimeter
MOU	Memorandum of Understanding
MWD	Metropolitan Water District
NAHC	Native American Heritage Commission
NAVD	North American Vertical Datum
NBA	North Bay Aqueduct
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOP	Notice of Preparation
OMR	Old and Middle River
OPR	Governor's Office of Planning and Research
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
POD	pelagic organism decline
ppt	parts per thousand
PRC	Public Resources Code
Proposed Project	Long-Term Operations of the State Water Project
PTM	particle tracking modeling
PWA	Public Water Agency
RCP	Representative Concentration Pathway
Reclamation	U.S. Department of the Interior, U.S. Bureau of Reclamation
RM	River Mile
ROC on LTO	Reinitiation of Consultation on the Long-Term Operations of SWP and CVP
RRDS	Roaring River Distribution System
RWQCB	Regional Water Quality Control Board
SCHISM	Semi-Implicit Cross-scale Hydroscience Integrated System Model
SDG	South Delta Gates
SED	Substitute Environmental Document
Skinner Fish Facility	John E. Skinner Delta Fish Protective Facility
SMSCG	Suisun Marsh Salinity Control Gates
SSP	shared socioeconomic pathways
SST	Salmonid Scoping Team
STARS	Survival, Travel Time, and Routing Simulation
State Water Board	State Water Resources Control Board
SWP	State Water Project
taf	thousand acre-feet
TBP	Temporary Barriers Project
TCL	Tribal Cultural Landscape

Term	Definition
TCR	Tribal cultural resource
TDS	total dissolved solids
TMDL	total maximum daily load
TUCP	Temporary Urgency Change Petition
UAIC	United Auburn Indian Community of the Auburn Rancheria
UC	University of California
USC	U.S. Code
USFWS	U.S. Fish and Wildlife Service
USGCRP	U.S. Global Change Research Program
USGS	U.S. Geological Survey
WQCP	Water Quality Control Plan
WSIP	Water Storage Investment Program
WY	water year