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- 2.11 Incidental Take Statement
  - 2.11.1 Amount or Extent of Take
  - 2.11.2 Effect of the Take
  - 2.11.3 Reasonable and Prudent Measures
  - 2.11.4 Terms and Conditions
- 2.12 Conservation Recommendations
- 2.13 Reinitiation of Consultation
- 2.14 “Not Likely to Adversely Affect” Determinations
- 3 MAGNUSON-STEVENSON FISHERY CONSERVATION AND MANAGEMENT ACT ESSENTIAL FISH HABITAT RESPONSE**
  - 3.1 Essential Fish Habitat Affected by the Project
  - 3.2 Adverse Effects on Essential Fish Habitat
  - 3.3 Essential Fish Habitat Conservation Recommendations
  - 3.4 Statutory Response Requirement
  - 3.5 Supplemental Consultation
- 4 FISH AND WILDLIFE COORDINATION ACT**
- 5 DATA QUALITY ACT DOCUMENTATION AND PRE-DISSEMINATION REVIEW**
  - 5.1 Utility
  - 5.2 Integrity
  - 5.3 Objectivity
- 6 REFERENCES**
- 7 APPENDICES**

**1 INTRODUCTION**

**1.1 Background**

**1.2 Coordinated Operations Agreement**

**1.3 Key Consultation Considerations**

**1.4 Consultation History**

**1.5 Proposed Federal Action**

**1.6 Interrelated and Interdependent Actions**

**2 ENDANGERED SPECIES ACT: BIOLOGICAL OPINION AND INCIDENTAL TAKE STATEMENT**

**2.1 Analytical Approach**

**2.2 Rangewide Status of the Species and Critical Habitat**

**2.3 Action Area**

**2.4 Environmental Baseline**

**2.5 Effects of the Action on the Species**

Species Evaluated

[Sample table below indicates which species are evaluated for which division; text will accompany to explain. e.g., .....]

<b>Division</b>	Upper Sacramento/Shasta	Trinity	Feather	Etc...
<b>Species</b>				
Winter-run Chinook salmon	Yes	No	No	Yes
Spring-run Chinook salmon	Yes	No	No	Yes
CCV Steelhead	Yes	No	No	Yes
Etc....	No	No	No	No

Action Deconstruction Intro

[Insert/refer here to slide 1 of action deconstruction that shows major project components for each division. Slides for each specific division will be in that division's text.]

**2.5.1 Stressors and Species Response**

**2.5.1.1 Central Valley Salmonid Recovery Plan**

- 2.5.1.1.1 Passage Impediments/Barriers**
- 2.5.1.1.2 Harvest/Angling Impacts**
- 2.5.1.1.3 Water Temperature**
- 2.5.1.1.4 Water Quality**
- 2.5.1.1.5 Flow Conditions**
- 2.5.1.1.6 Loss of Riparian Habitat and Instream Cover**
- 2.5.1.1.7 Loss of Natural River Morphology and Function**
- 2.5.1.1.8 Loss of Floodplain Habitat**
- 2.5.1.1.9 Loss of Tidal Marsh Habitat**
- 2.5.1.1.10 Spawning Habitat Availability**
- 2.5.1.1.11 Physical Habitat Alternation**
- 2.5.1.1.12 Invasive Species/Food Web Changes**
- 2.5.1.1.13 Entrainment/Impingement**
- 2.5.1.1.14 Predation**
- 2.5.1.1.15 Hatchery Effects**
- 2.5.1.1.16 Research and Monitoring**
  
- 2.5.1.2 Southern Oregon/Northern California Coast Coho Recovery Plan**
- 2.5.1.2.1 Adverse Hatchery Related Effects**
- 2.5.1.2.2 Impaired Water Quality**
- 2.5.1.2.3 Degraded Riparian Forest**
- 2.5.1.2.4 Increased Disease/Predation/Competition**
- 2.5.1.2.5 Altered Sediment Supply**
- 2.5.1.2.6 Lack of Floodplain and Chanel Structure**
- 2.5.1.2.7 Altered Hydrologic Function**
- 2.5.1.2.8 Barriers**
- 2.5.1.2.9 Impaired Estuary/Mainstem Function**
- 2.5.1.2.10 Adverse Fishery and Collecting Related Effects**

**2.5.1.3 Green Sturgeon Recovery Plan**

- 2.5.1.3.1 Passage Impediments/Barriers to Migration**
- 2.5.1.3.2 Altered Flow**
- 2.5.1.3.3 Altered Water Temperature**
- 2.5.1.3.4 Altered Sediment**
- 2.5.1.3.5 Altered Turbidity**
- 2.5.1.3.6 Take (Entrainment, Poaching & Bycatch)**
- 2.5.1.3.7 Contaminants**
- 2.5.1.3.8 Altered Prey Base**
- 2.5.1.3.9 Competition for Habitat**
- 2.5.1.3.10 Loss of Wetland Function**
- 2.5.1.3.11 Predation**
- 2.5.1.3.12 Water Depth Modification**
- 2.5.1.3.13 Disease**
- 2.5.1.3.14 Climate Change**
- 2.5.1.3.15 Research and Monitoring**

**2.5.1.4 Eulachon Recovery Plan**

- 2.5.1.4.1 Climate Change Impacts on Ocean Conditions**
- 2.5.1.4.2 Dams/Water Diversions**
- 2.5.1.4.3 Eulachon Bycatch**
- 2.5.1.4.4 Climate Change Impacts on Freshwater Habitat**
- 2.5.1.4.5 Predation**
- 2.5.1.4.6 Water Quality**
- 2.5.1.4.7 Catastrophic Events**
- 2.5.1.4.8 Disease**
- 2.5.1.4.9 Competition**
- 2.5.1.4.10 Shoreline Construction**
- 2.5.1.4.11 Tribal/First Nations Fisheries**
- 2.5.1.4.12 Non-indigenous species**
- 2.5.1.4.13 Recreational Harvest**
- 2.5.1.4.14 Commercial Harvest**
- 2.5.1.4.15 Scientific Monitoring**
- 2.5.1.4.16 Dredging**

**2.5.1.5 Southern Resident Killer Whale Recovery Plan**

- 2.5.1.5.1 Prey availability**
- 2.5.1.5.2 Other stressors**

**2.5.2 Upper Sacramento/Shasta Division**

[Insert here and at the beginning of each division a table indicating which stressors are evaluated for each project component in the division. Should have Naseem indicate best words to use in this description (e.g., NOT insignificant or discountable, not “N/A”, etc.). Example table below.]

## CVP/SWP Operations Biological Opinion

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<b>Stressor</b>	Increased upstream water temperature	Increased turbidity	Increased contaminant exposure	Etc.
<b>Project Component</b>				
Component 1	Yes	No	No	Yes
Component 2	Yes	No	No	Yes
Component 3	Yes	No	No	Yes
Etc....	No	No	No	No

### 2.5.2.1 Seasonal Operations

#### 2.5.2.1.1 Shasta Winter Ops.

##### 2.5.2.1.1.1 Flood Control Ops.

###### 2.5.2.1.1.1.1 Winter-Run Chinook Salmon Exposure, Response, and Risk

###### 2.5.2.1.1.1.1.1 Egg/Alevin

###### 2.5.2.1.1.1.1.2 Juveniles

###### 2.5.2.1.1.1.1.3 Adult

###### 2.5.2.1.1.1.2 Spring-Run Chinook Salmon Exposure, Response, and Risk

###### 2.5.2.1.1.1.2.1 Egg/Alevin

###### 2.5.2.1.1.1.2.2 Juveniles

###### 2.5.2.1.1.1.2.3 Adult

###### 2.5.2.1.1.1.3 CCV Steelhead Exposure, Response, and Risk

###### 2.5.2.1.1.1.3.1 Egg/Alevin

###### 2.5.2.1.1.1.3.2 Juveniles

###### 2.5.2.1.1.1.3.3 Adult

###### 2.5.2.1.1.1.4 Green Sturgeon Exposure, Response, and Risk



**2.5.2.1.1.1.4.1 Eggs/Larvae**

**2.5.2.1.1.1.4.2 Juveniles**

**2.5.2.1.1.1.4.3 Adult**

**2.5.2.1.1.2 Bend Bridge <100,000 cfs**

**2.5.2.1.1.3 "Winter – Spring Minimum flows (D-1641?)"**

**2.5.2.1.1.4 Fall and Winter Refill and Redd Maintenance**

**2.5.2.1.2 Shasta Spring Ops.**

**2.5.2.1.2.1 Flood Control Ops.**

**2.5.2.1.2.2 Balanced Shasta/Folsom (Instream demands & Outflow)**

**2.5.2.1.2.3 Refill (TCD Ops.)**

**2.5.2.1.2.4 Spring Pulse Flows**

**2.5.2.1.2.5 Spring Management of Spawning Locations**

**2.5.2.1.2.6 Shasta Cold Water Pool Management**

**2.5.2.1.3 Shasta Summer Ops.**

**2.5.2.1.3.1 Balanced Shasta/Folsom/Trinity (Instream demands, Outflow and Temp.)**

**2.5.2.1.3.2 Shasta Cold Water Pool Management**

**2.5.2.1.3.2.1 Tier 1**

**2.5.2.1.3.2.2 Tier 2**

**2.5.2.1.3.2.3 Tier 3**

**2.5.2.1.3.2.4 Tier 4**

**2.5.2.1.3.2.4.1 Temperature Management**

**2.5.2.1.3.2.4.2 LSNFH Production (Intervention)**

**2.5.2.1.3.2.4.3 Adult Rescues (Intervention)**

**2.5.2.1.3.2.4.4 Juvenile Trap and Haul (Intervention)**

**2.5.2.1.4 Shasta Fall Ops.**

**2.5.2.1.4.1 Balanced Shasta/Folsom/Trinity (Instream demands, Delta req. and Redd dewatering)**

**2.5.2.1.4.2 Shasta Cold Water Pool Management**

**2.5.2.1.4.3 Fall and Winter Refill and Redd Maintenance**

**2.5.2.1.4.4 Rice Decomposition Smoothing**

**2.5.2.2 Operation of a Shasta Dam Raise**

**2.5.2.3 Conservation Measures**

**2.5.2.3.1 Cold Water Management Tools**

**2.5.2.3.1.1 Battle Creek Restoration**

**2.5.2.3.1.2 Lower Intakes near Wilkins Slough**

**2.5.2.3.1.3 Shasta Temperature Control Device Improvements**

**2.5.2.3.2 Spawning and Rearing Habitat Restoration**

**2.5.2.3.2.1 Spawning Gravel Injection**

**2.5.2.3.2.2 40 - 60 Acres side channel habitat**

**2.5.2.3.2.3 Small Screen Program**

**2.5.3 Trinity River Division**

**2.5.3.1 Seasonal Operations**

**2.5.3.1.1 Trans-basin diversion**

**2.5.3.1.1.1 Sacramento temperature objectives.**

**2.5.3.1.2 Reservoir releases**

**2.5.3.1.2.1 Trinity River temperature objectives**

**2.5.3.1.2.2 End-of-year carryover storage (>600 TAF)**

**2.5.3.2 Trinity River ROD**

**2.5.3.2.1 Long-Term Plan to Protect Adult Salmon in the Lower Klamath River**

**2.5.3.2.2 Seasonal Operations**

**2.5.3.2.2.1 Sacramento Temperature Objectives**

**2.5.3.2.2.2 Trinity Temperature Objectives**

**2.5.3.2.2.3 End of year Carryover storage**

**2.5.3.3 Grass Valley Creek flows from Buckhorn Dam**

**2.5.3.3.1 Water Rights Permit 18879**

**2.5.3.3.1.1 Minimum flows**

**2.5.3.3.1.2 Flushing flows**

**2.5.3.3.1.3 Spring Pulse Flows**

**2.5.3.3.1.4 Fall spawning and attraction flows**

**2.5.3.4 Whiskeytown Reservoir Operations**

**2.5.3.4.1 Power generation and recreation**

**2.5.3.4.2 Sacramento Temperature Objectives**

**2.5.3.4.2.1 Sacramento Temperature Objectives**

**2.5.3.4.2.2 Sacramento water quality (Spring Creek Debris Dam)**

**2.5.3.4.3 Temperature management**

**2.5.3.4.3.1 Summer Temperatures**

**2.5.3.4.3.2 Fall Temperatures**

**2.5.3.4.4 Clear Creek Flows**

**2.5.3.4.4.1 Minimum instream flows**

**2.5.3.4.4.2 10,000 AF Spring pulse flow**

**2.5.3.4.4.3 Channel maintenance flows (10,000 AF)**

**2.5.3.4.5 Clear Creek Restoration Program**

**2.5.3.4.5.1 Balanced Sacramento/Trinity/Clear Creek**

**2.5.4 Feather River Division**

**2.5.4.1 FERC Project #2100-134**

**2.5.4.1.1 Instream Flows (D-1641)**

**2.5.4.1.2 Local deliveries and exports to Banks pumping**

**2.5.5 American River Division**

**2.5.5.1 Seasonal Operations**

**2.5.5.1.1 Power Generation**

**2.5.5.1.1.1 Power Bypass (Drought Declaration)**

**2.5.5.1.2 Winter Ops.**

**2.5.5.1.2.1 Flood Control**

**2.5.5.1.2.2 Limited releases >4,000 cfs**

**2.5.5.1.2.3 Chinook Redd dewatering (Jan – Feb)**

**2.5.5.1.3 Spring Ops.**

**2.5.5.1.3.1 Flood Control**

**2.5.5.1.3.2 Limited releases >4,000 cfs**

**2.5.5.1.3.3 Steelhead Redd dewatering (Feb – May)**

**2.5.5.1.3.4 Spring Pulse Flow (reshaping)**

**2.5.5.1.4 Summer Ops.**

**2.5.5.1.4.1 Delta WQ (D-1641)**

**2.5.5.1.4.2 Temperature Management**

**2.5.5.1.4.3 Drought Temperature Management**

**2.5.5.1.5 Fall Ops.**

**2.5.5.1.5.1 Delta WQ (D-1641)**

**2.5.5.1.5.2 Temperature Management**

**2.5.5.1.5.3 Redd Dewatering**

**2.5.5.2 2017 Flow Management Standard Releases and “Planning Minimum”**

**2.5.5.2.1 Minimum flow schedule/index**

**2.5.5.2.2 “Planning Minimum” (TBD 2019?)**

**2.5.5.2.3 Spring Pulse Flow (Mar – April)**

**2.5.5.3 Spawning and Rearing Habitat Restoration**

**2.5.6 Bay-Delta Division**

**2.5.6.1 Delta Cross Channel Operations**

**2.5.6.1.1 D-1641 WQ Sacramento Flows > 20,000 – 25,000**

**2.5.6.1.2 Oct. – Nov. 30 (fish presence)**

**2.5.6.1.3 Dec. – May 20 (closed)**

**2.5.6.1.4 May 21 – June 15 (14 days closed)**

**2.5.6.1.5 Dec/Jan (Drought)**

**2.5.6.1.6 Delta Cross-Channel Gate Improvements**

**2.5.6.2 Agricultural Barriers**

**2.5.6.2.1 Old River @ Tracy (April/July – Nov.)**

**2.5.6.2.2 Middle River (April/July – Nov.)**

**2.5.6.2.3 Grant Line Canal (April/July – Nov.)**

**2.5.6.3 Contra Costa Water District Rock Slough Operations**

**2.5.6.3.1 Intake volume (350 cfs, 195 TAF annual)**

**2.5.6.4 North Bay Aqueduct**

**2.5.6.4.1 Jan 15 – Mar. 31 (Dry and CD years)**

**2.5.6.5 Water Transfers**

**2.5.6.5.1 July – Nov.**

**2.5.6.5.2 Effects of developing water supplies**

**2.5.6.6 Suisun Marsh**

**2.5.6.6.1 Suisun Marsh Preservation Agreement**

**2.5.6.6.2 Suisun Marsh Salinity Control Gates Operation**

**2.5.6.6.3 Suisun Marsh Food Subsidies**

**2.5.6.7 Export Operations**

**2.5.6.7.1 OMR Management**

**2.5.6.7.1.1 Onset: 14-day avg. >-5,000 cfs**

**2.5.6.7.1.1.1 “First Flush” (IEWPP) Dec. 1 – Jan. 31**

**2.5.6.7.1.1.2 Jan 1, 5% rule (WR, SR or St)**

**2.5.6.7.1.2 End: June 30 Or BOTH:**

**2.5.6.7.1.2.1 CCR 25°C**

**2.5.6.7.1.2.2 95% past Chipps OR Mossdale 72°F**

**2.5.6.7.1.3 Additional RT OMR Restrictions**

**2.5.6.7.1.3.1 Turbidity Bridge Avoidance**

**2.5.6.7.1.3.2 Larval and Juvenile Delta Smelt**

**2.5.6.7.1.3.3 Wild Central Valley Steelhead Protection**

**2.5.6.7.1.3.4 Salvage or Loss Thresholds**

**2.5.6.7.1.3.4.1 50%**

**2.5.6.7.1.3.4.2 75%**

**2.5.6.7.1.4 Storm-Related OMR Flexibility**

**2.5.6.7.2 Entrainment and Salvage Actions**

**2.5.6.7.2.1 Minimum Export Rate (HHS 1,500 cfs)**

**2.5.6.7.2.2 Tracy Fish Collection Facility**

**2.5.6.7.2.2.1 Predator Removal (CO2 injection)**

**2.5.6.7.2.2.2 Tracy Fish Facility Improvements**

**2.5.6.7.2.3 Skinner Fish Facility**

**2.5.6.7.2.3.1 Skinner Fish Facility Improvements**

**2.5.6.7.2.3.1.1 Predator Removal**

**2.5.6.7.2.3.1.2 Clifton Court Aquatic Weed Removal**

**2.5.6.7.2.3.1.2.1 Operational minimization procedures**

**2.5.6.7.2.3.2 Release Sites**

**2.5.6.8 Conservation Measures**

**2.5.6.8.1 Additional Measures**

**2.5.6.8.1.1 Operations**

**2.5.6.8.1.1.1 Fall Delta Smelt Habitat**

**2.5.6.8.1.1.2 San Joaquin Basin Steelhead Telemetry Study**

**2.5.6.8.1.1.3 Sacramento Deepwater Ship Channel**

**2.5.6.8.1.1.4 North Delta Food Subsidies / Colusa Basin Drain**

**2.5.6.8.1.2 Habitat Restoration**

**2.5.6.8.1.2.1 Tidal Habitat Restoration 8,000 acres (2008 BiOp)**

**2.5.6.8.1.2.2 Yolo Bypass SHR and Fish Passage Project**

**2.5.6.8.1.2.3 Predator Hot Spot Removal**

**2.5.6.8.1.3 Fish Intervention**

**2.5.6.8.1.3.1 Reintroduction efforts from Fish Conservation and Culture Lab**

**2.5.6.8.1.3.2 Delta Fish Species Conservation Hatchery**

**2.5.7 Stanislaus River Division**

**2.5.7.1 Seasonal Operations**

**2.5.7.1.1 Flood Control**

**2.5.7.1.1.1 Tulloch Lake**

**2.5.7.1.2 Stanislaus Stepped Release Plan**

**2.5.7.1.2.1 “60-20-20” Classification**

**2.5.7.1.3 Alteration of Stanislaus DO Requirement**

**2.5.7.1.4 Stanislaus Watershed Team**

**2.5.7.2 Conservation Measures**

**2.5.7.2.1 Spawning and Rearing Habitat Restoration**

**2.5.7.2.2 Temperature Management Study**

**2.5.8 San Joaquin River**

**2.5.8.1 San Joaquin River Restoration Program**

**2.5.8.2 Conservation Measures**

**2.5.8.2.1 Lower SJR Habitat**

**2.5.9 Effects of the Action on Southern Resident Killer Whales**

**2.5.10 CVP/SWP Wide**



**2.5.10.1 Divert and store water consistent with obligations under water rights and decisions by the State Water Resources Control Board**

**2.5.10.2 Shasta Critical Determinations and Allocations to Water Service and Water Repayment Contractors**

**2.5.10.3 2018 Revised Coordinated Operations Agreement**

**2.6 Effects of the Action on Critical Habitat**

**2.6.1 General Habitat Impacts**

**2.6.1.1 Sedimentation and Turbidity**

**2.6.1.2 Water Temperatures**

**2.6.1.3 Loss of Riparian Vegetation**

**2.6.1.4 Reduction in Habitat Complexity**

**2.6.1.5 Prey Availability**

**2.6.1.6 Water Quality**

**2.6.2 Upper Sacramento/Shasta Division**

**2.6.2.1 Effects to Designated Critical Habitat PBFs for ESA-listed Salmonids**

**2.6.2.1.1 Passage Impediments/Barriers**

**2.6.2.1.2 Harvest/Angling Impacts**

**2.6.2.1.3 Water Temperature**

**2.6.2.1.4 Water Quality**

**2.6.2.1.5 Flow Conditions**

**2.6.2.1.6 Loss of Riparian Habitat and Instream Cover**

**2.6.2.1.7 Loss of Natural River Morphology and Function**

**2.6.2.1.8 Loss of Floodplain Habitat**

**2.6.2.1.9 Loss of Tidal Marsh Habitat**

**2.6.2.1.10 Spawning Habitat Availability**

**2.6.2.1.11 Physical Habitat Alteration**

**2.6.2.1.12 Invasive Species/Food Web Changes**

**2.6.2.1.13 Entrainment/Impingement**

**2.6.2.1.14 Predation**

**2.6.2.1.15 Hatchery Effects**

**2.6.2.1.16 Research and Monitoring**

**2.6.2.2 Effects to sDPS Green Sturgeon Critical Habitat**

**2.6.2.2.1 Passage Impediments/Barriers**

**2.6.2.2.2 Harvest/Angling Impacts**

**2.6.2.2.3 Water Temperature**

**2.6.2.2.4 Water Quality**

**2.6.2.2.5 Flow Conditions**

**2.6.2.2.6 Loss of Riparian Habitat and Instream Cover**

**2.6.2.2.7 Loss of Natural River Morphology and Function**

**2.6.2.2.8 Loss of Floodplain Habitat**

**2.6.2.2.9 Loss of Tidal Marsh Habitat**

**2.6.2.2.10 Spawning Habitat Availability**

**2.6.2.2.11 Physical Habitat Alternation**

**2.6.2.2.12 Invasive Species/Food Web Changes**

**2.6.2.2.13 Entrainment/Impingement**

**2.6.2.2.14 Predation**

**2.6.2.2.15 Hatchery Effects**

**2.6.2.2.16 Research and Monitoring**

**2.6.3 Trinity River Division**

**2.6.3.1 Effects to Designated Critical Habitat PBFs for ESA-listed Salmonids**

**2.6.3.1.1 Passage Impediments/Barriers**

**2.6.3.1.2 Harvest/Angling Impacts**

**2.6.3.1.3 Water Temperature**

**2.6.3.1.4 Water Quality**

**2.6.3.1.5 Flow Conditions**

**2.6.3.1.6 Loss of Riparian Habitat and Instream Cover**

**2.6.3.1.7 Loss of Natural River Morphology and Function**

**2.6.3.1.8 Loss of Floodplain Habitat**

**2.6.3.1.9 Loss of Tidal Marsh Habitat**

**2.6.3.1.10 Spawning Habitat Availability**

**2.6.3.1.11 Physical Habitat Alteration**

**2.6.3.1.12 Invasive Species/Food Web Changes**

**2.6.3.1.13 Entrainment/Impingement**

**2.6.3.1.14 Predation**

**2.6.3.1.15 Hatchery Effects**

**2.6.3.1.16 Research and Monitoring**

**2.6.4 Feather River Division**

**2.6.5 American River Division**

**2.6.5.1 Effects to Designated Critical Habitat PBFs for ESA-listed Salmonids**

**2.6.5.1.1 Passage Impediments/Barriers**

**2.6.5.1.2 Harvest/Angling Impacts**

**2.6.5.1.3 Water Temperature**

**2.6.5.1.4 Water Quality**

**2.6.5.1.5 Flow Conditions**

**2.6.5.1.6 Loss of Riparian Habitat and Instream Cover**

**2.6.5.1.7 Loss of Natural River Morphology and Function**

**2.6.5.1.8 Loss of Floodplain Habitat**

**2.6.5.1.9 Loss of Tidal Marsh Habitat**

**2.6.5.1.10 Spawning Habitat Availability**

**2.6.5.1.11 Physical Habitat Alternation**

**2.6.5.1.12 Invasive Species/Food Web Changes**

**2.6.5.1.13 Entrainment/Impingement**

**2.6.5.1.14 Predation**

**2.6.5.1.15 Hatchery Effects**

**2.6.5.1.16 Research and Monitoring**

**2.6.6 Bay-Delta Division**

**2.6.6.1 Effects to Designated Critical Habitat PBFs for ESA-listed Salmonids**

**2.6.6.1.1 Passage Impediments/Barriers**

**2.6.6.1.2 Harvest/Angling Impacts**

**2.6.6.1.3 Water Temperature**

**2.6.6.1.4 Water Quality**

**2.6.6.1.5 Flow Conditions**

**2.6.6.1.6 Loss of Riparian Habitat and Instream Cover**

**2.6.6.1.7 Loss of Natural River Morphology and Function**

**2.6.6.1.8 Loss of Floodplain Habitat**

**2.6.6.1.9 Loss of Tidal Marsh Habitat**

**2.6.6.1.10 Spawning Habitat Availability**

**2.6.6.1.11 Physical Habitat Alteration**

**2.6.6.1.12 Invasive Species/Food Web Changes**

**2.6.6.1.13 Entrainment/Impingement**

**2.6.6.1.14 Predation**

**2.6.6.1.15 Hatchery Effects**

**2.6.6.1.16 Research and Monitoring**

**2.6.6.2 Effects to sDPS Green Sturgeon Critical Habitat**

**2.6.6.2.1 Passage Impediments/Barriers**

**2.6.6.2.2 Harvest/Angling Impacts**

**2.6.6.2.3 Water Temperature**

**2.6.6.2.4 Water Quality**

**2.6.6.2.5 Flow Conditions**

**2.6.6.2.6 Loss of Riparian Habitat and Instream Cover**

**2.6.6.2.7 Loss of Natural River Morphology and Function**

**2.6.6.2.8 Loss of Floodplain Habitat**

**2.6.6.2.9 Loss of Tidal Marsh Habitat**

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**2.6.8.1.3 Water Temperature**

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