

INCIDENTAL TAKE PERMIT
FOR LONG-TERM
OPERATION OF THE STATE
WATER PROJECT IN THE
SACRAMENTO-SAN
JOAQUIN DELTA

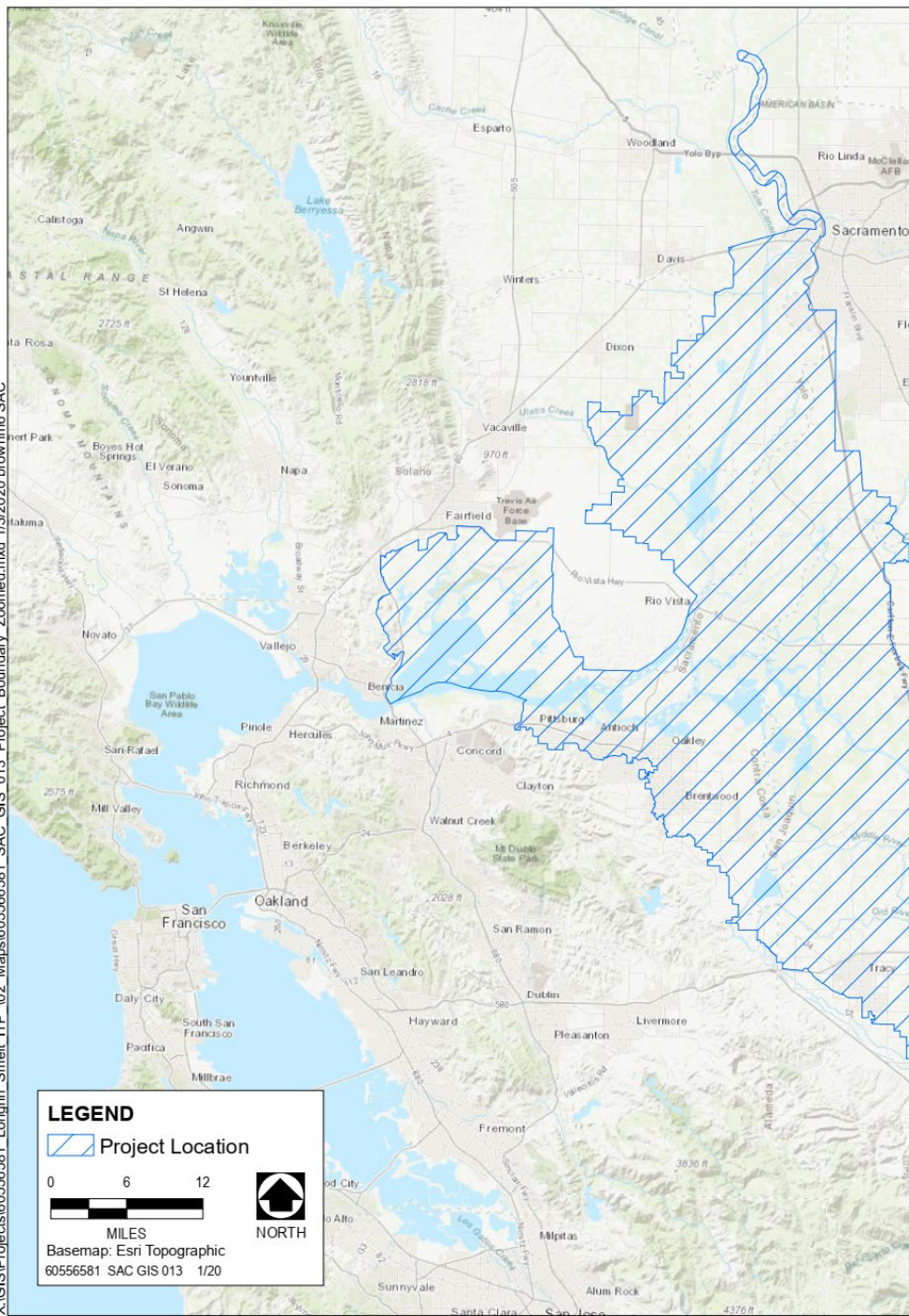
July 13th, 2020



OVERVIEW OF STATE WATER PROJECT ITP

- Ten-year permit (2020-2030)
- Four covered species: Delta smelt, longfin smelt, winter- and spring-run Chinook salmon
- CVP-coordinated protection for steelhead and green sturgeon
- Adaptive Management Program
- Integrated with the Voluntary Agreements
- Key differences from 2019 Fed. BiOps
 - Decision-making structure
 - Single year and daily salmon loss thresholds
 - Spring export curtailments and blocks of water





PROJECT AREA

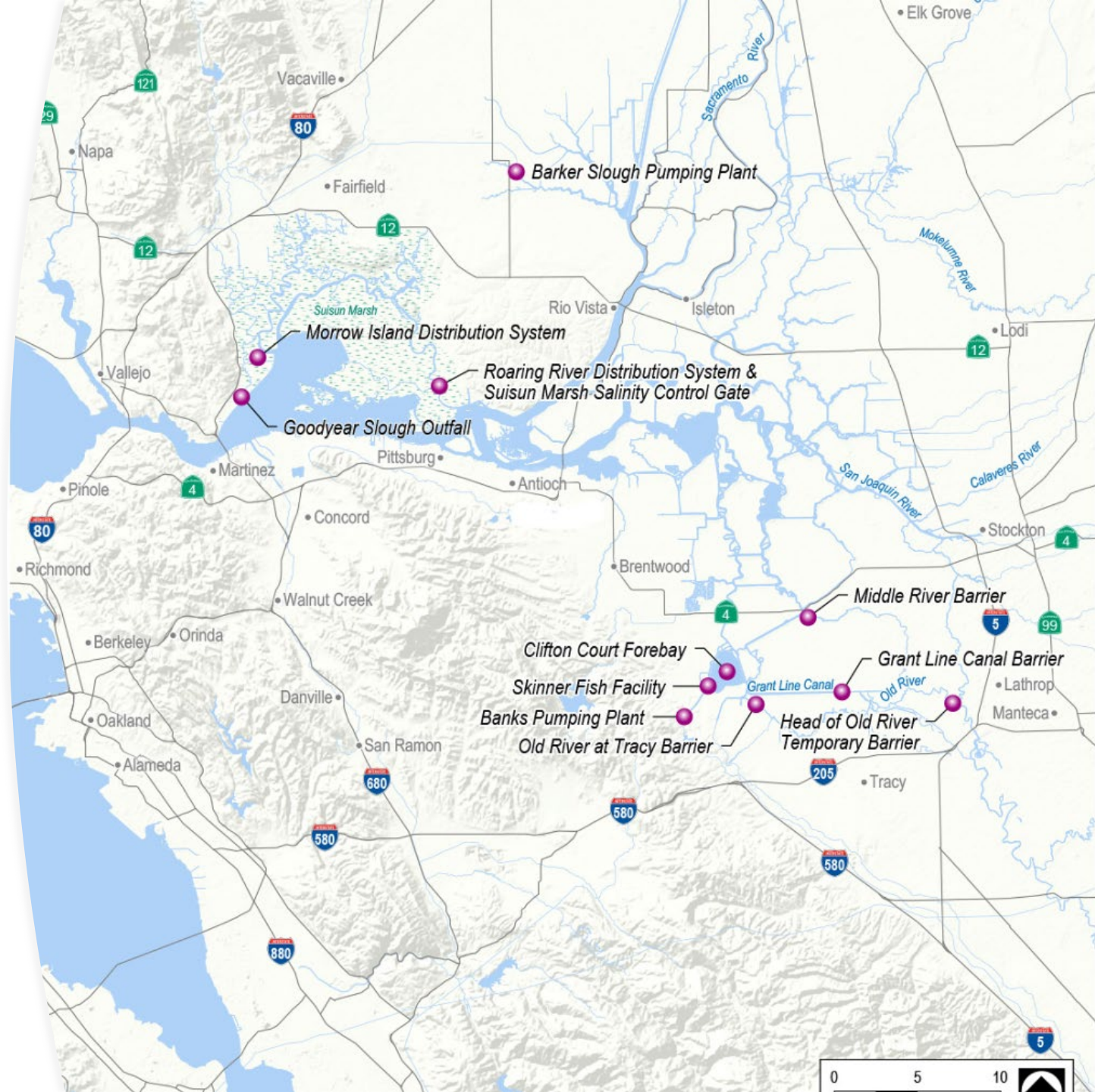
- Sacramento River from Feather River confluence to I Street Bridge
- Legal Delta
- Suisun Marsh and Bay

Source: California Department of Fish and Wildlife

PROJECT FACILITIES

Includes **only** SWP facilities in the Delta and Suisun Marsh

- Banks Pumping Plant
- Skinner Fish Facility
- Clifton Court Forebay (incl. predator control and aquatic weed control and removal)
- South Delta Temporary Barrier Program (without the Head of Old River Barrier)
- Operation of a migratory barrier at Georgiana Slough
- Barker Slough Pumping Plant and North Bay Aqueduct
- Roaring River Distribution System, Morrow Island Distribution System, and Suisun Marsh Salinity Control Gates



REAL TIME OPERATIONS – OMR MANAGEMENT

- Condition 8.3 – Onset of OMR management
 - Condition 8.3.1 – Integrated early winter pulse protection
 - Condition 8.3.2 – Salmonid presence
 - Condition 8.3.3 – Adult longfin smelt entrainment protection
- Condition 8.8 – End of OMR management
 - Smelt: Clifton Court Forebay temperature
 - Salmon:
 - >95% of winter- and spring- run Chinook exited the Delta, and
 - Temperature at Mossdale and Prisoner's Point



HABITAT RESTORATION- MITIGATION REQUIREMENTS



Delta Smelt

9.1.1 Complete tidal marsh restoration targets from FWS 2008 Biological Opinions w/CDFW consistency (8,000 acres) within first 6 years of ITP issuance

- *7,907 total acres under construction or planned*
- Restore an additional 396.3 acres of tidal marsh habitat for Barker Slough Pumping Plant mitigation

Longfin Smelt

- 9.1.2 Complete tidal marsh restoration targets from 2009 CDFW ITP (800 acres) within 6 years of ITP issuance
- *590 acres already completed and credited (Tule Red)*

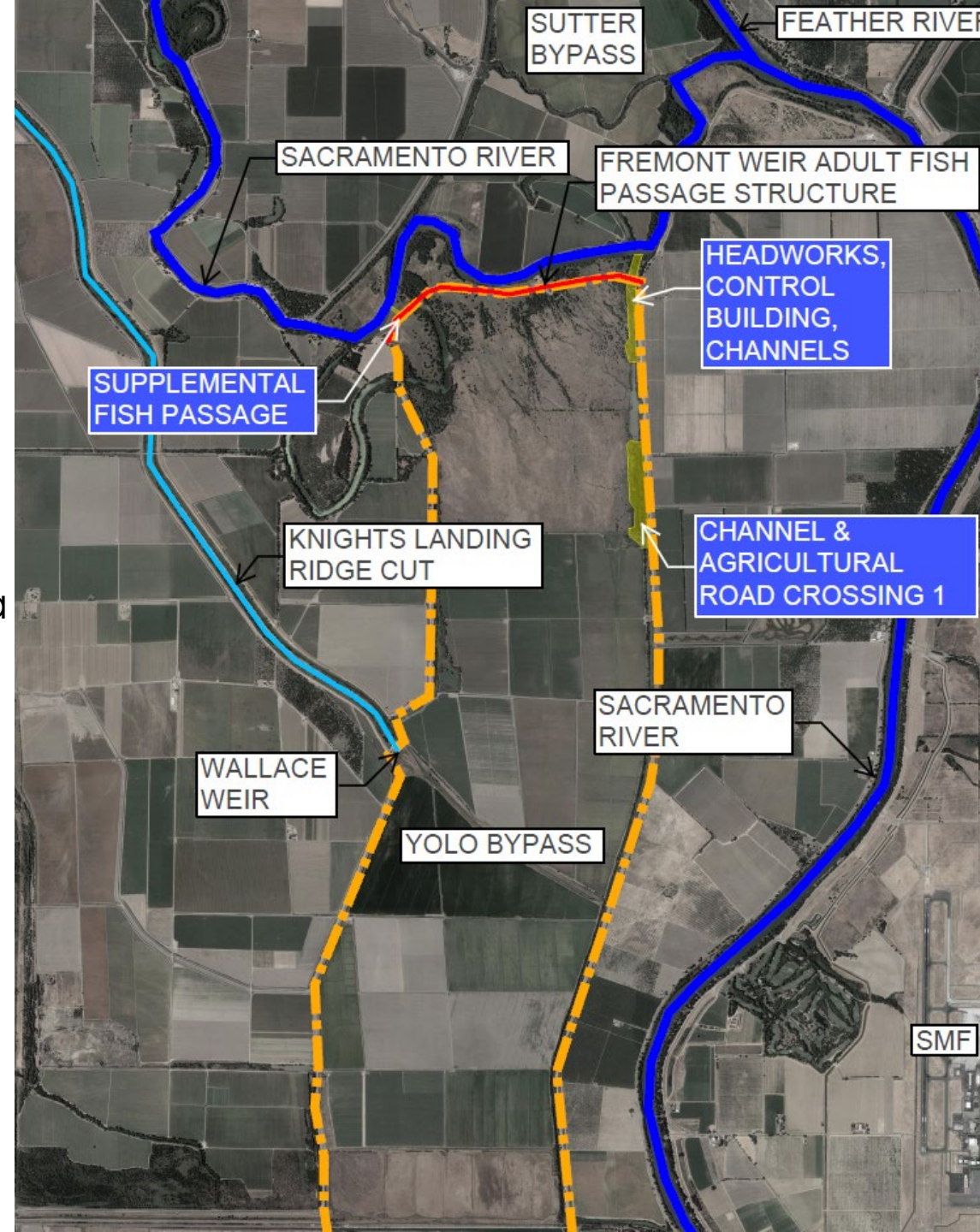
Restore an additional 396.3 acres of tidal marsh habitat as compensatory mitigation of the Project



HABITAT RESTORATION- MITIGATION REQUIREMENTS

9.2.2 Yolo Bypass Big Notch Project

- Create critical floodplain habitat for juvenile salmonids and other native fish (splittail, sturgeon)
- Improve the migration corridor for adult fish between the Sacramento River, floodplains of the Yolo Bypass, and the Sacramento-San Joaquin Delta
- Construct a gated notch at Fremont Weir
- Key permits were recently submitted for the CDFW ITP, 1600, Clean Water Act Section 404, and Section 401 Water Quality Certification.
- Flow Easement Acquisition and Construction should be completed by the end of 2022



REAL TIME OPERATIONS

Implementation of operating criteria founded on long-term monitoring

- Real time operations teams: Smelt, Salmon, WOMT
- Weekly risk assessments and operation advice
 - Relies upon current long-term monitoring
 - Development of salvage forecast models
- Salvage and/or survey operations criteria
 - FWMT, SLS, 20 mm, Chipps Island Trawl and EDSM





California Department of Fish and Wildlife
Ecosystem Conservation Division
P.O. Box 944209
SACRAMENTO, CA, 94244-2090

California Endangered Species Act
Incidental Take Permit No. 2081-2019-066-00

**LONG-TERM OPERATION OF THE STATE WATER PROJECT IN THE SACRAMENTO SAN JOAQUIN
DELTA**

Authority: This California Endangered Species Act (CESA) incidental take permit (ITP) is issued by the California Department of Fish and Wildlife (CDFW) pursuant to Fish and Game Code section 2081, subdivisions (b) and (c), and California Code of Regulations, Title 14, section 783.0 et seq. CESA prohibits the take¹ of any species of wildlife designated by the California Fish and Game Commission as an endangered, threatened, or candidate species.² CDFW may authorize the take of any such species by permit if the conditions set forth in Fish and Game Code section 2081, subdivisions (b) and (c) are met. (See Cal. Code Regs., tit. 14, § 783.4).

Permittee: California Department of Water Resources
Principal Officer: Michelle Banonis, Assistant Chief Deputy Director
Contact Person: Dean Messer, 916-376-9700
Mailing Address: P.O. Box 942836
Sacramento, CA 94236-0001

Effective Date and Expiration Date of this ITP:

This ITP shall be executed in duplicate original form and shall become effective once a duplicate original is acknowledged by signature of the Permittee on the last page of this ITP and returned to CDFW's Habitat Conservation Planning Branch at the address listed in the Notices section of this ITP. Unless renewed by CDFW, this ITP's authorization to take the Covered Species shall expire on **March 31, 2030**.

¹Pursuant to Fish and Game Code section 86, "take" means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." (See also *Environmental Protection Information Center v. California Department of Forestry and Fire Protection* (2008) 44 Cal.4th 459, 507 [for purposes of incidental take permitting under Fish and Game Code section 2081, subdivision (b), "take" ... means to catch, capture or kill].)

²The definition of an endangered, threatened, and candidate species for purposes of CESA are found in Fish and Game Code sections 2062, 2067, and 2068, respectively.

WILL REQUIRE CLOSE COORDINATION WITHIN AND OUTSIDE THE DEPARTMENT

- Relationship with long-term monitoring (CDFW, IEP)
- Adaptive management action implementation
 - CDFW and DWR, DWR/CDFW with Reclamation
 - O&M and Div. of Environmental Sciences
- New science
 - Delta smelt and longfin smelt
 - Food web research
 - Winter- and spring-run Chinook salmon
- New research facilities

RELATIONSHIP WITH IEP LONG-TERM MONITORING

- Key IEP sampling elements identified in Project Description
 - EDSM
 - FMWT
 - 20 mm Survey
 - SKT
 - SLS
 - STN
- Independent review of IEP programs that support ITP implementation
 - CDFW 20 Survey and Smelt Larval Survey
 - Expansion of the Smelt Larval Survey (temporally and spatially)

Table 3.13-1: IEP Core Long-Term Monitoring Elements

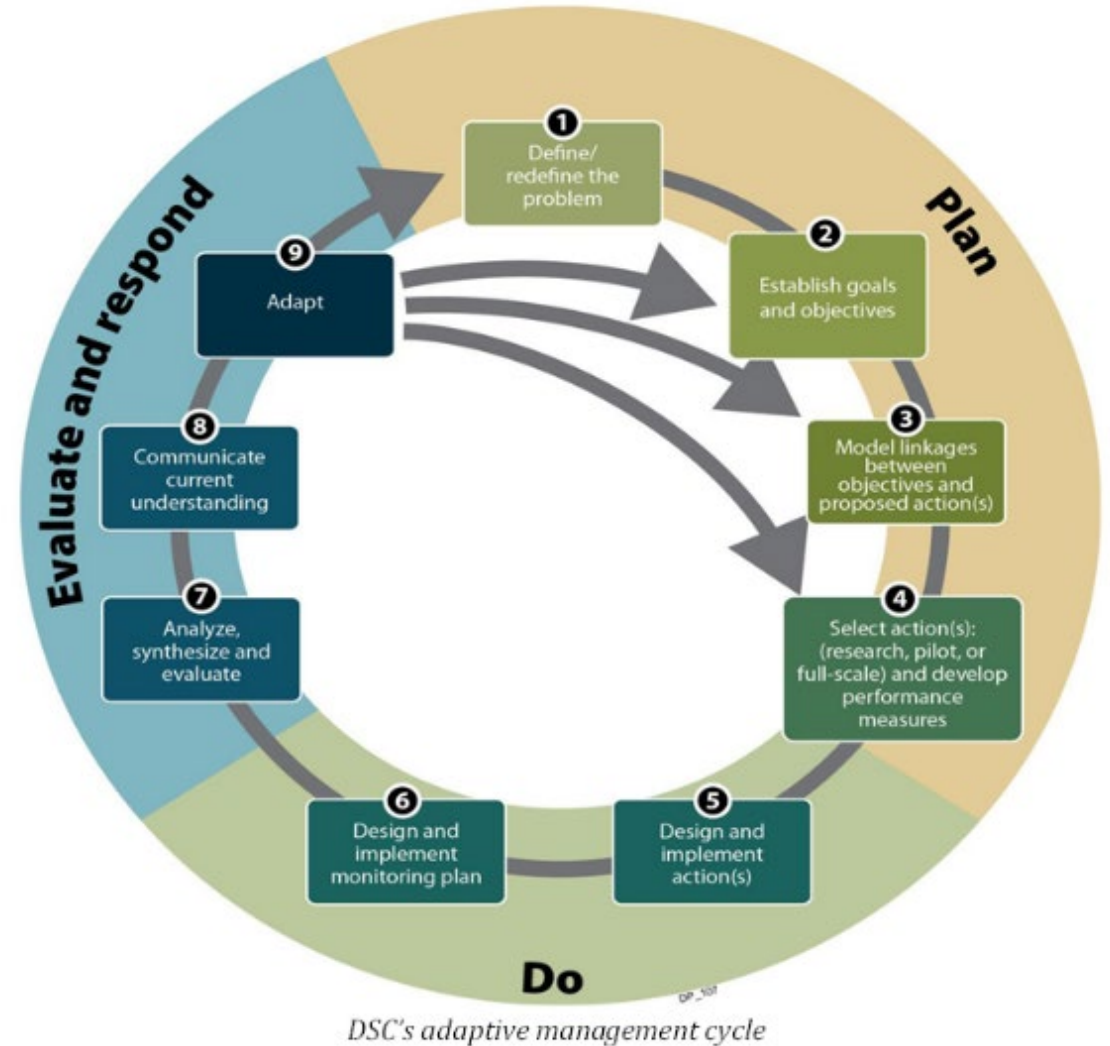
Title	Agency
Fall Midwater Trawl (FMWT)	CDFW
Summer Townet Survey (STN)	CDFW
Est and Marine Fish Survey (Bay Study)	CDFW
Bay Shrimp and Crab Surveys (Bay Study)	CDFW
Delta Flows Network	USGS
20mm Delta Smelt Survey (20mm)	CDFW
Juvenile Salmon Monitoring (DJFMP)	USFWS
Coleman Late Fall Run Tagging	USFWS
Mossdale Spring Trawl (Mossdale)	CDFW
Environmental Monitoring Program	DWR
Central Valley Juvenile Salmon and Steelhead Monitoring (Knights Landing)	CFDW
Upper Estuary Zooplankton Sampling	CDFW
Spring Kodiak Trawl (SKT)	CDFW
UCD Suisun Marsh Fish Monitoring	UCD
Smelt Larval Sampling (SLS)	CDFW
Operation of Thermograph Stations	USGS
Juvenile Salmon Emigration Real Time Monitoring (DJFMP)	USFWS
Tidal Wetland Monitoring	CDFW
Yolo Bypass Fish Monitoring Program (YBFMP)	DWR
Resident Fishes Survey (DJFMP)	USFWS

Note: List based on key monitoring programs in the draft 2020 IEP work plan

PROCESS TO ADDRESS SCIENTIFIC UNCERTAINTY

“Adaptive management is a science-based approach to evaluate management actions and address uncertainties associated with those actions to achieve specified objectives and to inform subsequent decision making.”

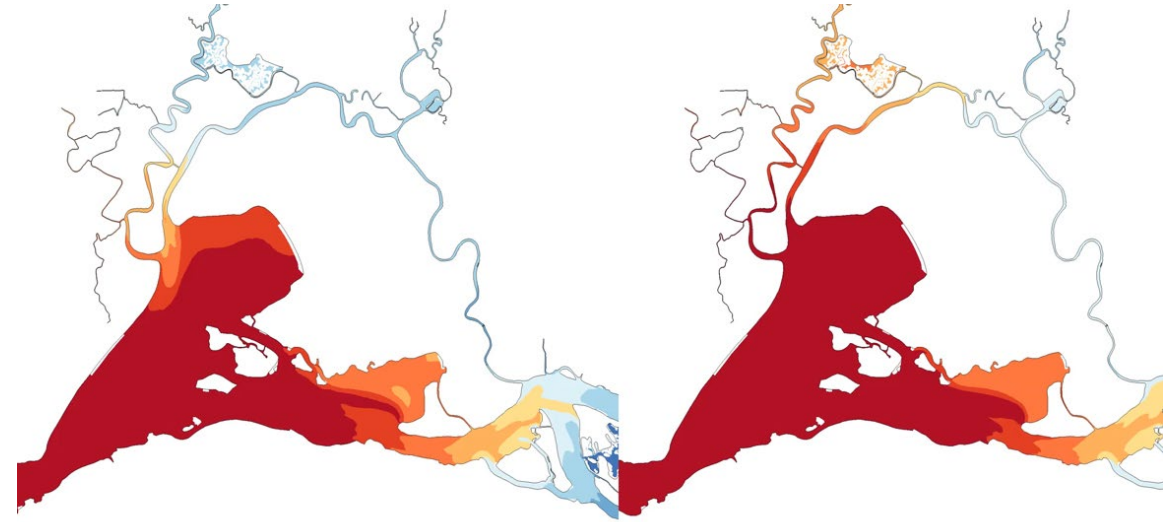
- DWR, CDFW, and State Water Contractors--ability to expand membership and coordinate with other AM efforts
- Structured-Decision Making Process identified for key AM elements
- Will build off science implemented by IEP, CSAMP, and Delta Science Program
- AM will allow for potential amendments to permit elements (big check-in after 4 years)



ADAPTIVE MANAGEMENT

SUMMER-FALL ACTION

- Annual planning process integrated with Adaptive Management and SDM
- Criteria:
 - $X2 \leq 80$ km in September and October of wet and above normal years
 - 60 days of gate operations in above normal and below normal years
 - 30 days gate operations in dry years
 - 4 ppt salinity standard at Belden's Landing*
- Improved monitoring in Grizzly Bay



SCIENCE AND MONITORING - SALMON

- Condition 7.5 – Salmonid monitoring and science requirements
 - 7.5.1 – Upstream monitoring during water transfer window
 - 7.5.2 – New and ongoing monitoring to develop a spring-run JPE
 - 7.5.3 – Additional salmon science requirements
 - Pathology monitoring
 - Rearing habitat in the Bay-Delta
 - Spring-run life cycle model
 - Entrainment prediction tool
- Condition 8.6.6 – Evaluate proactive salmon entrainment minimization



SCIENCE AND MONITORING - SMELT

- Condition 7.6 – Smelt monitoring and science requirements
 - 7.6.1 – Longfin smelt December larval surveys
 - 7.6.2 – Smelt larval entrainment monitoring
 - 7.6.3 – Longfin smelt science program
 - 7.6.4 – Delta smelt summer-fall habitat
- Condition 9.1.3.3 – New monitoring stations in Grizzly Bay and Suisun Marsh



LONGFIN SMELT SCIENCE PROGRAM

Science priorities:

- Develop a new life cycle model for longfin smelt to test management alternatives (i.e, OMR actions, flow actions)
- Complete longfin smelt lifecycle in captivity at the FCCL
- Characterize spawning substrate and microhabitat
- Distribution of spawning substrate in Delta, Cache Slough, and Suisun Marsh
- Improve understanding of adult migration behavior and juvenile outmigration behavior



RIO VISTA ESTUARINE RESEARCH STATION

- Requirement to provide 66% of the funding required to construct the Rio Vista Estuarine Research Station (RVRS)
- Constructed on the decommissioned City of Rio Vista Army Base
- Consolidate IEP staff into one riverfront research facility



QUESTIONS?

