



CALIFORNIA
WATER FIX
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Biological Assessment for the California WaterFix

United States Department of the Interior, Bureau of Reclamation, Federal Lead Agency

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ABBREVIATIONS AND ACRONYMS

°C	Celsius
°F	Fahrenheit
7DADM	seven day average daily maximum
af	acre feet
AFRP	Anadromous Fish Restoration Program
AMMs	avoidance and minimization measures
ARG	American River Group
A-weighted decibel	dBA
B2IT	b2 interagency team
BA	Biological Assessment
BAFF	bioacoustic fish fence
Banks PP	Banks Pumping Plant
Bay-Delta Plan	WQCP for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary
BDCP	Bay Delta Conservation Plan
Biological Review	Biological Review for Endangered Species Act Compliance of the WY 2015 Updated Drought Contingency Plan for July–November Project Description
BiOp	biological opinion
BMPs	best management practices
CALFED	CALFED Bay-Delta Program
CAMT	Collaborative Adaptive Management Team
CCF	Clifton Court Forebay
CCFPP	Clifton Court Forebay Pump Plant
CCPP	CCF pumping plant
CCV	California Central Valley
CCWD	Contra Costa Water District
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
cfs	cubic feet per second
CIDH	cast-in-drilled-hole
CNDDB	California Natural Diversity Database
COA	Coordinated Operation Agreement
CPT	cone penetration testing
CSAMP	Cooperative Science and Adaptive Management Program
CV	Central Valley
CVP	Central Valley Project
CVPA	Central Valley Project Act
CVPIA	Central Valley Project Improvement Act
cy	cubic yards
D-1641	State Water Resources Control Board Decision-1641
dB	decibels
DCC	Delta Cross Channel

DCT	Delta Condition Team
DDT	dichlorodiphenyltrichloroethane
DEIS	draft environmental impact statement
Delta	Sacramento–San Joaquin Delta
DHCCP	Delta Habitat Conservation and Conveyance Program
DOP	CPV and SWP Drought Operations Plan and Operational Forecast for April 1, 2014 through November 15, 2014
DOSS	Delta Operations for Salmon and Sturgeon
DOT	Washington Department of Transportation
DPM	Delta Passage Model
DPS	distinct population segment
DWR	California Department of Water Resources
E/I	export/inflow
EIS	environmental impact statement
ENSO	El Niño Southern Oscillation
EOS	end-of-September
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESA of 1972, as the amended	Section 7 of the Endangered Species Act
ESRP	Endangered Species Recovery Program
ESU	evolutionarily significant unit
FCRPS	Federal Columbia River Power System
FERC	Federal Energy Regulatory Commission
FERC DEIR PA	Facilities Relicensing Draft Environmental Impact Report Proposed Project Alternative
FFGS	Floating Fish Guidance Structure
FFTT	Fish Facilities Technical Team’s
FL	fork length
FR	Federal Register
FRFH	Feather River Fish Hatchery
ft/s	foot per second
GCID	Glenn Colusa Irrigation District’s
general excavation	General Excavation for the NCCF and SCCF
GIS	Geographical Information System
H to V	horizontal to vertical
HCP	habitat conservation plan
HCP/NCCP	East Contra Costa County Habitat Conservation Plan/Natural Communities Conservation Plan
HFC	High Flow Channel
HMMP	Hazardous Material Management Plan
HOR	Head of Old River
HORB	Head of Old River Barrier
I-	Interstates
I 205	Interstate 205
I 580	Interstate 580

IEP	Interagency Ecological Program
IES	Illuminating Engineering Society
IF	Intermediate Forebay
Interior	U.S. Department of the Interior's
IOS	Interactive Object-Oriented Salmon Simulation
IRP footnote	Independent Review Panel
ITP	Incidental Take Permit
Jones PP	C.W. 'Bill' Jones Pumping Plant
LFC	Low Flow Channel
LOO footnote	Long-term Operations Opinions
LSNFH	Livingston Stone National Fish Hatchery
LSZ	low-salinity zone
M&I	municipal and industrial
mg/L	milligrams per liter
MIDS	Morrow Island Distribution System
MOA	Memorandum of Agreement
mph	miles per hour
NAA	No Action Alternative
NBA	North Bay Aqueduct
NCCF	North Clifton Court Forebay
NDOI	Net Delta Outflow Index
NEPA	National Environmental Policy Act
new CCF embankment	New Clifton Court Forebay Embankment
new CCF spillway and stilling basin	New Spillway and Stilling Basin
new forebay structures	New Forebay Structures
NMFS	National Marine Fisheries Service
NPB	Nonphysical Fish Barrier
NWR	National Wildlife Refuge
NWS	National Weather Service
OBAN	Oncorhynchus Bayesian Analysis
OMR	Old and Middle River
ORV	off-road vehicles
PA	proposed action
PBDEs	polybrominated diphenyl ethers
PBFs	physical and biological features
PCBs	polychlorinated biphenyls
PCEs	primary constituent elements
PDO	Pacific Decadal Oscillation
PG&E	Pacific Gas and Electric Company
PGS	Pittsburg Generating Station
Plan	Water Quality Control Plan
POD	Pelagic Organism Decline
Project Description	Updated Project Description for July-November 2015 Drought Response Actions to Support Endangered Species Act Consultations

Reclamation	United States Department of Interior, Bureau of Reclamation
RM	river mile
RMS	root mean square
RPA	reasonable and prudent alternative
RRDS	Roaring River Distribution System
RTDOT	Real Time Drought Operations Management Team
RTM	reusable tunnel material
RTO	Real-Time Operational
SA	Settlement Agreement
SCCF	South CCF
SCT	Section 7 Consultation Team
Secretary	Secretary of the Interior
SEL	sound exposure level
SFCWA	State and Federal Contractors Water Agency
Skinner	John E. Skinner Delta Fish Protective Facility
SMSCG	Suisun Marsh Salinity Control Gates
SMUD	Sacramento Municipal Utility District
south CCF	South Clifton Court Forebay
SPCCP	Spill Prevention, Containment, and Countermeasure Plan
SPL	sound pressure level
SPT	standard penetration test
SR	State Route
SRTTG	Sacramento River Temperature Task Group
SRWTP	Sacramento Regional Wastewater Treatment Plan
State Water Board	State Water Resources Control Board
SWG	Smelt Working Group
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TBM	tunnel boring machine
TBP	Temporary Barriers Project
TCAs	Temperature Control Actions
Temperature Management Plan	Revised Sacramento River Water Temperature Management Plan June 2015
TFCF	Tracy Fish Collection Facility
Tracy PP	Tracy Pumping Plant
TUCP	Temporary Urgency Change Petition
U.S.C.	United States Code
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
Western	Western Area Power Administration
WOMT	Water Operations Management Team
WQCP	Water Quality Control Plan
WSE	water surface elevation
WUA	weighted usable area

X2 an indicator of habitat suitability for many San Francisco Estuary organisms and is associated with variance in abundance of diverse components of the ecosystem

YCI Year-Class Index