

Acronyms and Abbreviations

°	degree
°C	degrees Celsius
°F	degrees Fahrenheit
µg/g	micrograms per gram
µg/L	micrograms per liter
µg/m ³	micrograms per cubic meter
µmhos/cm	micromhos per centimeter
µmoles/m ² /s	micromoles per square meter per second
1-D	one-dimensional
2012 Plan	<i>California Department of Water Resources Climate Action Plan Phase I: Greenhouse Gas Emissions Reduction Plan</i>
2017 Framework	USFWS's 2017 <i>Framework for Assessing Impacts on Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)</i>
2-D	two-dimensional
404(q) MOA	<i>Memorandum of Agreement between the Environmental Protection Agency and the Department of the Army to "Minimize, to the Maximum Extent Practicable, Duplication, Needless Paperwork and Delays in the Issuance of Permits"</i>
AAQA	ambient air quality analysis
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACE	Areas of Conservation Emphasis
ACM	asbestos-containing material
ACR	American Carbon Registry
ACTC	Alameda County Transportation Commission
ADT	average daily traffic
AEP	annual exceedance probability
AF	acre-feet
AFSP	Anadromous Fish Screen Program
AFY	acre-feet per year
AI	area of impact
AI-A	area of impact for archaeological resources
AI-BE	area of impact for built-environment resources
AIP	Agreement in Principle
AIPCP	Aquatic Invasive Plan Control Program
ANAB	American National Standards Institute National Accreditation Board
AP-42	EPA's <i>AP-42 Compilation of Air Pollutant Emission Factors</i>
APLIC	Avian Power Line Interaction Committee
AR6 Report	<i>Sixth Assessment Report of the Intergovernmental Panel on Climate Change: Climate Change 2021: The Physical Science Basis</i>
ARIS	Adaptive Resolution Imaging Sonar
ARMP	Archaeological Resources Management Plan
AST	aboveground storage tank
AVAQMD	Antelope Valley Air Quality Management District
AVE	area of visual effect

AWQC/SA	<i>Human Health Recreational Ambient Water Quality Criteria or Swimming Advisories</i>
B.P.	before present
BAAQMD	Bay Area Air Quality Management District
BACT	best available control technology
Banks Pumping Plant	Harvey O. Banks Pumping Plant
BART	Bay Area Rapid Transit
Bay Area	San Francisco Bay Area
Bay-Delta Plan, Bay-Delta WQCP	<i>Water Quality Control Plan for the San Francisco Bay/Sacramento–San Joaquin Delta Estuary</i>
BBID	Byron-Bethany Irrigation District
BDCP	<i>Bay Delta Conservation Plan</i>
BenMAP-CE	Benefits Mapping and Analysis Program Community Edition
Bethany EPR	<i>Volume 1: Delta Conveyance Final Draft Engineering Project Report—Bethany Reservoir Alternative</i>
BETP	built-environment treatment plan
bgs	below ground surface
BHC	benzene hexachloride
BiOp	biological opinion
BIOS	Biogeographic Information and Observation System
BMP	best management practice
BTEX compounds	benzene, toluene, ethylbenzene, and xylenes
<i>C. immitis</i>	<i>Coccidioides immitis</i>
C2VSim-FG	California Central Valley Simulation Fine Grid
CAAQS	California ambient air quality standards
CAISMP	California Aquatic Invasive Species Management Plan
CAISO	California Independent System Operator
Cal. Code Regs.	California Code of Regulations
CAL FIRE	California Department of Forestry and Fire Protection
Cal-IPC	California Invasive Plant Council
Cal/OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
CalEnviroScreen	California Communities Environmental Health Screening Tool
CALFED	CALFED Bay-Delta Program
CalGEM	California Geologic Energy Management Division
CalOES	Governor’s Office of Emergency Services
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAMx	Comprehensive Air Quality Model with extensions
CARB	California Air Resources Board
CBC	California Building Code
CCCHD	Contra Costa County Health Department
CCP	Comprehensive Conservation Plan
CCT	Central California Traction Company
CCTA	Contra Costa Transportation Authority
CCTAG	Climate Change Technical Advisory Group
CCWD	Contra Costa Water District
CCY	compact cubic yards

CDFA	California Department of Food and Agriculture
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CDPH	California Department of Public Health
CDWA	Central Delta Water Agency
C-E EPR	<i>Volume 1: Delta Conveyance Final Draft Engineering Project Report—Central and Eastern Options</i>
CEC	California Energy Commission
CEHC	California Essential Habitat Connectivity
CEQ	Council on Environmental Quality
CEQ Guidance	Council on Environmental Quality <i>Environmental Justice Guidance under the National Environmental Policy Act</i>
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	California Geological Survey
CGU	concentration goal unit
CH	County Highway
CH ₄	methane
CHAB	cyanobacteria harmful algal bloom
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
Chrisman Pumping Plant	Ira J. Chrisman Wind Gap Pumping Plant
cKOP	candidate key observation point
CLSM	controlled low-strength backfill material
CMIP5	Coupled Model Intercomparison Project Phase 5
CMP	Compensatory Mitigation Plan
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO Protocol	Carbon Monoxide Protocol
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
COA	Coordinated Operation Agreement
COLE	coefficient of linear extensibility
CoSMoS	Coastal Storm Modeling System
COTP	California-Oregon Transmission Project
COVID-19	coronavirus disease 2019
CPT	cone penetration test
CPUC	California Public Utilities Commission
CR	County Road
CRC	California Resources Company
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank

CSD	Cosumnes Community Services District
CT	Central Tendency
CTR	California Toxics Rule
CUPA	Certified Unified Program Agency
CVFPB	Central Valley Flood Protection Board
CVFPP	Central Valley Flood Protection Plan
CVJV	Central Valley Joint Venture
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
CWA	Clean Water Act
D-1641	State Water Resources Control Board Water Right Decision 1641
DAC	disadvantaged community
dB	decibel
dBA	A-weighted decibel
DBP	disinfection byproduct
DBW	California State Parks Division of Boating and Waterways
DCA	Delta Conveyance Design and Construction Authority
DCC	Delta Cross Channel
DDT	dichlorodiphenyltrichloroethane
Delta	Sacramento–San Joaquin Delta
Delta HMP	<i>Flood Hazard Mitigation Plan for the Sacramento–San Joaquin Delta</i>
Delta LTMS	Delta Long-Term Management Strategy
Delta Protection Act	Johnston-Baker-Andal-Boatwright Delta Protection Act of 1992
Delta Reform Act	Sacramento–San Joaquin Delta Reform Act of 2009
Delta TCL	Sacramento–San Joaquin Delta Tribal Cultural Landscape
DeltaGW	Delta Groundwater
DIDSON	Dual-Frequency Identification Sonar
DMC	Delta-Mendota Canal
DMM	deep mechanical mixing
DO	dissolved oxygen
DOC	dissolved organic carbon
DPC	Delta Protection Commission
DPIIC	Delta Plan Interagency Implementation Committee
DPM	diesel particulate matter
DPR	California Department of Parks and Recreation
DRMS	Delta Risk Management Strategy
dS	deciSiemens
dS/m	deciSiemens per meter
DSC	Delta Stewardship Council
DSM2	Delta Simulation Model II
DSOD	California Department of Water Resources, Division of Safety of Dams
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
E. coli	<i>Escherichia coli</i>
E:I	Delta export/inflow ratio
EACCS	East Alameda County Conservation Strategy
eBART	East Contra Costa County BART extension
EBMUD	East Bay Municipal Utility District

EBRPD	East Bay Regional Park District
EC	electrical conductivity
ECCC HCP/NCCP	<i>East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan</i>
EDCP	<i>Egeria densa</i> Control Program
EDD	Employment Development Department
EDSM	Enhanced Delta Smelt Monitoring
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EKAQMD	Eastern Kern Air Quality Management District
ELF	extremely low-frequency
EMF	electromagnetic fields
EMF Design Guidelines	EMF Design Guidelines for Electrical Facilities
EMFAC2017 and CT-EMFAC2017	Emissions FACTors model
EMT	emergency medical technician
Engineering Project Reports, EPRs	<i>Volume 1: Delta Conveyance Final Draft Engineering Project Report—Central and Eastern Options and Volume 1: Delta Conveyance Final Draft Engineering Project Report—Bethany Reservoir Alternative</i>
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ERC	emission reduction credit
ERP	Ecosystem Restoration Program
ERT	electrical resistivity tomography
ESA	federal Endangered Species Act
ESU	evolutionarily significant unit
ET	evapotranspiration
FAA	Federal Aviation Administration
FAV Control Program	Floating Aquatic Vegetation Control Program
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration
FHWA Guidelines	<i>FHWA's Guidelines for the Visual Impact Assessment of Highway Projects</i>
FIRM	Flood Insurance Rate Map
Fish & G. Code	California Fish and Game Code
FMMP	Farmland Mapping and Monitoring Program
FMUs	future mitigation unit
Foundation	Bay Area Clean Air Foundation
Fourth Assessment	California's Fourth Climate Change Assessment
FPD	fire protection district
FR	<i>Federal Register</i>
Framework	Community Benefits Program Framework
FRSA	Feather River Service Area
FRWP	Freeport Regional Water Project
ft/s	feet per second
FTA	Federal Transit Administration
FTE	full-time equivalent

FY	fiscal year
g	gravity
GAD	Geometric Approval Drawing
GAMA	Groundwater Ambient Monitoring Assessment
GCID	Glenn-Colusa Irrigation District
GCM	global climate model
GHG	greenhouse gas
Gianelli Pumping-Generating Plant	William R. Gianelli Pumping-Generating Plant
GIS	geographic information system
gpm	gallons per minute
GPS	global positioning system
GSA	groundwater sustainability agencies
gsf	gross square feet
GSP	groundwater sustainability plans
GW	gigawatt
GWh	gigawatt hour
GWP	global warming potential
HAA	haloacetic acid
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HALS	Historic American Landscape Survey
HCP	Habitat Conservation Plan
HCP/NCCP	Habitat Conservation Plan/Natural Community Conservation Plan
HDLEVIP	Heavy-Duty Low-Emission Vehicle Incentive Program
HDPE	high-density polyethylene
HEC-RAS	Hydrologic Engineering Center River Analysis System
HFC	hydrofluorocarbon
HIA	health impact assessment
HPI	Health Places Index
HRA	health risk assessment
HVAC	heating, ventilation, and air conditioning
Hz	hertz
I-	Interstate
I:E	inflow/exports ratio
IAV	invasive aquatic vegetation
IEP	Interagency Ecological Program
IEP MAST	Interagency Ecological Program Management, Analysis, and Synthesis Team
IEPR	Integrated Energy Policy Report
inSar	Interferometric Synthetic Aperture Radar
IOS	Interactive Object-Oriented Simulation
IPaC	Information for Planning and Consultation
IPCC	Intergovernmental Panel on Climate Change
IS/MND	Initial Study/Mitigated Negative Declaration
IWFM	Integrated Water Flow Model
ITP	Incidental Take Permit
Jones Pumping Plant	C. W. "Bill" Jones Pumping Plant

JPOD	Joint Point of Diversion
JSATS	Juvenile Salmon Acoustic Telemetry System
km	kilometer
KOP	key observation point
kV	kilovolt
Kw	soil erodibility factor
kW	kilowatt
kWh	kilowatt hour
L_{dn}	day-night sound level
LED	light-emitting diode
LEP	linear extensibility percent
L_{eq}	equivalent sound level
LESA	Land Evaluation and Site Assessment
LID	low-impact development
LiDAR	light detection and ranging
L_{max}	maximum sound level
L_{min}	minimum sound levels
LMP	Land Management Plan
LOCA	Localized Constructed Analogs
Lodi Gas	Lodi Gas Storage, LLC
LOS	level of service
LSE	Load Serving Entity
LSIWA	Lower Sherman Island Wildlife Area
LURMP	Land Use and Resource Management Plan for the Primary Zone of the Delta
LUST	leaking underground storage tank
L_{xx}	percentile-exceeded sound level
M-	Marine Highway
M&I	municipal and industrial
M&T	Mining and Tunneling
MAF	million acre-feet
Mcf	thousand cubic feet
MCL	maximum contaminant level
MDAQMD	Mojave Desert Air Quality Management District
MEI	maximumly exposed individual
MERV	Minimum Efficiency Reporting Value
mG	milligauss
mg/kg	milligrams per kilogram
mg/kg dw	milligrams per kilogram dry weight
mg/L	milligrams per liter
MHI	median household income
ml	milliliters
MLD	most likely descendant
mm	millimeter
mm/yr	millimeters per year
mmhos/cm	millimhos per centimeter
MMMP	Mercury Management and Monitoring Plan
MMPA	Marine Mammal Protection Act

MMRP	Mitigation Monitoring and Reporting Program
MOU	memorandum of understanding
MPN	most probable number
MRZ	mineral resource zone
MSL	mean sea level
MTC	Metropolitan Transportation Commission
MTCO _{2e}	metric tons of carbon dioxide equivalent
MUTCD	<i>2014 California Manual on Uniform Traffic Control Devices</i>
MVCD	mosquito vector control district
MW	megawatt
MWh	megawatt hour
N	nitrogen
N ₂ O	nitrous oxide
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NAL	numeric action level
NAVD88	North American Vertical Datum of 1988
NCCP	Natural Community Conservation Plan
NDD	north Delta diversion
NDWA	North Delta Water Agency
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
ng/L	nanograms per liter
NGVD	National Geodetic Vertical Datum
NMFS	National Marine Fisheries Service
NO	nitric oxide
NO ₂	nitrogen dioxide
NOA	naturally occurring asbestos
NOP	Notice of Preparation
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NPPA	California Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSR	new source review
NTU	nephelometric turbidity unit
NWR	National Wildlife Refuge
NWS	National Weather Service
O&M	operations and maintenance
OAMMP	Operations Adaptive Management and Monitoring Plan
OBAN	Oncorhynchus Bayesian Analysis
OE/AAA	Obstruction Evaluation/Airport Airspace Analysis
OEHHA	Office of Environmental Health Hazard Assessment
OHWM	ordinary high water mark
OMR	Old and Middle River
OPC	California Ocean Protection Council
OPC Guidance	<i>State of California Sea-Level Rise Guidance: 2018 Update</i>

OPR	Governor's Office of Planning and Research
Order 90-05	State Water Board Water Right Order 90-05
OSHA	Occupational Safety and Health Administration
OSWCR	Online System of Well Completion Report
P	phosphorus
PARO	Project Power & Risk Office
Pb	lead
PCB	polychlorinated biphenyl
PFC	perfluorocarbon
PG&E	Pacific Gas and Electric Company
PGA	peak ground acceleration
PGD	permanent ground displacement
PI	plasticity index
PIP	Phased Identification Procedure
PL	Public Law
Plan	GHG Reduction Plan
PLSS	Public Land Survey System
PM	particulate matter
PM10	particulate matter 10 microns in diameter or less
PM2.5	particulate matter 2.5 microns in diameter or less
POD	pelagic organism decline
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
ppm	parts per million
ppt	parts per thousand
PPU	Preserve Planning Unit
PPV	peak particle velocity
PRMMP	Paleontological Resources Monitoring and Mitigation Plan
project	Delta Conveyance Project
PRS	paleontological resources specialist
PSHA	Probabilistic Seismic Hazard Analyses
Pub. Resources Code	California Public Resources Code
PWA	public water agency, also known as SWP contractor or State Water Project contractor
QSD	Qualified SWPPP Developer
QSP	Qualified SWPPP Practitioner
RA	Resource Adequacy
RCCC	Rio Cosumnes Correctional Center
RCP	Representative Concentration Pathway
RD	Reclamation District
RDEIR/SDEIS	Recirculated Draft EIR/Supplemental Draft EIS
Reclamation	U.S. Department of the Interior Bureau of Reclamation
RegionalSan	Sacramento Regional County Sanitation District
REPP	Renewable Energy Procurement Plan
Retrospective Analysis	Retrospective Analysis of Changed Central Valley Project and State Water Project Conditions Due to Changes in Delta Regulations
RFD	Rural Fire District
RFMP	Regional Flood Management Plan
RKOP	rendered key observation point

RM	River Mile
RMS	root mean square
ROC on LTO	Reinitiation of Consultation on the Long-Term Operations of SWP and CVP
ROD	Record of Decision
ROG	reactive organic gas
RPA	Reasonable and Prudent Alternative
RPS	Renewables Portfolio Standard
RTM	reusable tunnel material
RTP	regional transportation plan
RUSLE2	Revised Universal Soil Loss Equation
RV	recreational vehicle
RWQCB	Regional Water Quality Control Board
SacOES	Sacramento County Office of Emergency Services
SACOG	Sacramento Area Council of Governments
SAFCA	Sacramento Area Flood Control Agency
SaMT	Salmon Monitoring Team
SASD	Sacramento Area Sewer District
SAV Control Program	Submersed Aquatic Vegetation Control Program
SAVE	Surrendered and Abandoned Vessel Exchange program
SB	Senate Bill
SCADA	supervisory control and data acquisition
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCT	South County Transit
SCWA	Sacramento County Water Agency
SDAPCD	San Diego Air Pollution Control District
SECAT	Sacramento Emergency Clean Air Transportation
Seismic Hazard Analyses	<i>Seismic Hazard Analyses and Development of Conceptual Seismic Design Ground Motions for the Delta Conveyance</i>
SEL _{cumulative}	cumulative sound exposure level
SEL	sound exposure level
SF ₆ Switchgear Regulation	Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear
SF ₆	sulfur hexafluoride
SFBAAB	San Francisco Bay Area Air Basin
SFHA	Special Flood Hazard Area
SFNA	Sacramento Federal Nonattainment Area
SGMA	Sustainable Groundwater Management Act
SIL	significant impact level
SJC MSHCP	<i>San Joaquin County Multi-Species Habitat Conservation and Open Space Plan</i>
SJCOG	San Joaquin Council of Governments
SJOES	San Joaquin County Office of Emergency Services
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
Skinner Fish Facility	John E. Skinner Delta Fish Protective Facility
SLCP	short-lived climate pollutant

SLEV	St. Louis encephalitis virus
SLM	sound-level meter
SLOAPCD	San Luis Obispo Air Pollution Control District
SLR	sea level rise
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMARA	Surface Mining and Reclamation Act
SMCL	Secondary MCL
SMGB	State Mining and Geology Board
SMSCG	Suisun Marsh Salinity Control Gate
SMT	Smelt Monitoring Team
SMUD	Sacramento Municipal Utility District
SO ₂	sulfur dioxide
Solano County MSHCP	<i>Solano County Multispecies Habitat Conservation Plan</i>
SPCCP	spill prevention, control, and countermeasure plan
SPFC	State Plan of Flood Control
SPL	sound pressure level
SPT	Standard Penetration Test
SR	State Route
SRA	State Recreation Area
SRFCP	Sacramento River Flood Control Project
SSHCP	<i>South Sacramento Habitat Conservation Plan</i>
SSP	shared socioeconomic pathway
SST	Salmonid Scoping Team
SSURGO	Soil Survey Geographic
State Water Board	State Water Resources Control Board
study area	environmental setting and potential environmental impact area
SVAB	Sacramento Valley Air Basin
SVP	Society of Vertebrate Paleontology
SWMP	stormwater management programs
SWP	State Water Project
SWP water contractors	public water agencies that hold water supply contracts with DWR to deliver State Water Project water
SWPPP	Stormwater Pollution Prevention Plan
TAC	toxic air contaminant
TAF	thousand acre-feet
TANC	Transmission Agency of Northern California
TBM	tunnel boring machine
TCR	Tribal cultural resource
TCRIR	<i>Tribal Cultural Resources Identification Report</i>
TCRMP	Tribal Cultural Resources Management Plan
TDM	transportation demand management
TDS	total dissolved solids
TEC	Tribal Engagement Committee
Teerink Pumping Plant	John R. Teerink Wheeler Ridge Pumping Plant
THM	trihalomethane
TIMES	Twitchell Island Mitigation Enhancement Site
TMDL	total maximum daily load
TMP	traffic management plan

TNM	FHWA Traffic Noise Model Version 2.5
Tribes	California Native American Tribes
TSS	total suspended solids
UC	University of California
UCERF3	third Uniform California Earthquake Rupture Forecast
UCMP	University of California Museum of Paleontology
Update 2020	<i>California Department of Water Resources Climate Action Plan Phase 1: Greenhouse Gas Emissions Reduction Plan Update 2020</i>
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDA	U.S. Department of Agriculture
USDA NASS	U.S. Department of Agriculture National Agricultural Statistics Service
USFWS	U.S. Fish and Wildlife Service
USGCRP	U.S. Global Change Research Program
USGS	U.S. Geological Survey
UST	underground storage tank
VCAPCD	Ventura County Air Pollution Control District
VERA	Voluntary Emissions Reduction Agreement
VIC	Variable Infiltration Capacity
VMT	vehicle miles traveled
WAPA	Western Area Power Administration
Wat. Code	California Water Code
WCG	Wildlife Crossing Guild
WEEV	western equine encephalomyelitis virus
WEG	wind erodibility group
WHMP	Wildlife Hazards Management Plan
WID	Woodbridge Irrigation District
WNV	West Nile virus
WOMT	Water Operation Management Team
WQCP	water quality control plan
WREM	Water Resources Engineering Memorandum No. 10b
WSE	water surface elevation
WWTP	wastewater treatment plant
YBFMP	Yolo Bypass Fish Monitoring Program
YCI	year-class index
YSAQMD	Yolo-Solano Air Quality Management District
ZEV	zero-emission vehicle