
DEVIL CANYON PROJECT RELICENSING



FINAL PRE-APPLICATION DOCUMENT

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State of California
California Natural Resources Agency
DEPARTMENT OF WATER
RESOURCES
Hydropower License Planning and
Compliance Office

EDMUND G. BROWN JR.
Governor
State of California

JOHN LAIRD
Secretary for
California Natural Resources

MARK W. COWIN
Director
Department of Water Resources





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COMMONLY USED TERMS, ACRONYMS & ABBREVIATIONS

§	Section
°C	degrees Celsius
°F	degrees Fahrenheit
µg	microgram
µg/L	microgram per liter
µS/cm	microsiemens per centimeter
AAQS	ambient air quality standards
ACC	Area Control Center
ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act of 1990
ADOE	Archaeological Determinations of Eligibility
AF	acre-feet
AIS	aquatic invasive species
aquatic	Living in or near water; used of plants adapted for a partially or completely submerged life
ARG	Agricultural Supply
ATL	advisory tissue level
B.P.	Before Present
barren	Areas within a vegetation dominated habitat that are devoid of vegetation
BCC	Bird of Conservation Concern
bedrock	The solid rock that lies beneath soil and other loose surface materials.
BIA	U.S. Department of the Interior, Bureau of Indian Affairs
BLM	U.S. Department of the Interior, Bureau of Land Management
BMI	benthic macroinvertebrates
BMP	best management practices
C.L.	confidence level
CAL FIRE	California Department of Forestry and Fire Protection
CAL-EPA	California Environmental Protection Agency
Cal-IPC	California Invasive Plant Council

Caltrans	California Department of Transportation
CalVeg	California Vegetation Classification System
canopy layer	The uppermost layer of vegetation in a plant community. In forested areas, mature trees comprise the canopy layer, while the tallest herbaceous species constitute the canopy layer in a marsh
CARB	California Air Resources Board
CAS	channeled apple snails
CCR	California Code of Regulations
CDFA	California Department of Food and Agriculture
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CDOF	California Department of Finance
CDP	census designated place
CEDEN	California Environmental Data Exchange Network
CEII	Critical Energy Infrastructure Information
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGC	California Government Code
chaparral	A shrubland adapted to summer-dry Mediterranean climate by having shrubs with evergreen, leathery leaves, such as chamise, manzanita, or scrub oak species
CHL	California Historical Landmark
CLAWA	Crestline-Lake Arrowhead Water Agency
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
COLD	Cold Freshwater Habitat
COMM	Commercial and Sportfishing

convergent plate boundary	A boundary in which two plates collide. The collision can be between two continents (continental collision), a relatively dense oceanic plate and a more buoyant continental plate (subduction zone) or two oceanic plates (subduction zone)
CPHI	California Points of Historical Interest
CPUE	catch per unit effort data
CRHR	California Register of Historical Resources
CRLF	California red-legged frog
CSS	Crestline Soaring Society
CSUSB	California State University San Bernardino
CTR	California Toxics Rule
CVP	Central Valley Project
CWA	Clean Water Act (also known as the Federal Water Pollution Control Act)
CWC	California Water Code
dBA	decibel
DBW	California Department of Parks and Recreation, Division of Boating and Waterways
DCPA	dimethyl tetrachloroterephthalate (Dacthal)
DCU	Deer Conservation Unit
deepwater habitats	permanently flooded lands lying below the deepwater boundary of wetlands
deformation	General term for folding, faulting, and other processes resulting from shear, compression, and extension of rocks.
deposit	Any accumulation of sediment
DLA	Draft Application for a New License
DO	dissolved oxygen
dominant species	A plant species that exerts a controlling influence on or defines the character of a community
DPR	California Department of Parks and Recreation
DPS	Distinct Population Segment
drainage	Any channel that carries water
DSOD	California Department of Water Resources, Division of Safety of Dams
DWLOC	drinking water level of comparison

DWR	California Department of Water Resources
EA	Environmental Assessment
EAP	Emergency Action Plan
earthquake	A sudden ground motion or vibration of the Earth. Produced by a rapid release of stored-up energy along an active fault
EIS	Environmental Impact Statement
ELISA	Enzyme linked immunosorbent assay
emergent plant	A rooted herbaceous plant species that has parts extending above a water surface.
EPA	U.S. Environmental Protection Agency
epicenter	The point on the Earth's surface located directly above the focus of an earthquake
ESA	Endangered Species Act
Euro-Americans	Euro-Americans are Europeans who migrated to North America to make their home here
FA	fan-cooled forced air circulation
fault	A fracture in the Earth along which one side has moved in relative to the other. Sudden movements on faults cause earthquakes
FE	federal endangered
FEA	Final Environmental Assessment
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FGC	California Fish and Game Code
FLA	Final Application for a New License
flooded	A condition in which the soil surface is temporarily covered with flowing water from any source, such as streams overflowing their banks, runoff from adjacent or surrounding slopes, inflow from high tides, or any combination of sources
flora	A list of all plant species that occur in an area.
fluvial	Term used to describe river or stream-related features or processes. Fluvial deposits are sediments deposited by the flowing water of a stream

FMP	Fishery Management Plan for Commercial and Recreational Salmon Fisheries
focus	The location where the earthquake begins. The ground ruptures at this spot, then seismic waves radiate out from this point
forest	An area (or vegetation type) in which trees dominate in the overstory where their crowns generally overlap (with greater than 60 percent canopy cover)
formation	A rock formation is a body of rock of considerable extent with distinctive characteristics that allow geologists to map, describe, and name it
FPA	Federal Power Act
frequently flooded	A flooding class in which flooding is likely to occur often under normal weather conditions (more than 50-percent chance of flooding in any year or more than 50 times in 100 years)
FR	Federal Register
FRM	Federal Reference Method
FRRRM	Forest and Rangeland Renewable Resources Planning Act
FSS	Listed as Sensitive by the US Department of Agriculture, Forest Service
FT	federal threatened
GHG	greenhouse gas
GIS	Geographic Information System
GLO	General Land Office
gneiss	A coarse-grained, foliated metamorphic rock that commonly has alternating bands of light and dark-colored minerals
growing season	The portion of the year when soil temperatures at 19.7 inches below the soil surface are higher than biologic zero (5 °C). For ease of determination this period can be approximated by the number of frost-free days
GWh	gigawatt hours
GWR	Ground Water Recharge
HA	health advisory
HAER	Historic American Engineering Record
HCP	Habitat Conservation Plan

herb	A nonwoody individual of a macrophytic species. Seedlings of woody plants (including vines) that are less than 3.2 feet in height are considered to be herbs
herbaceous-dominated	Herbaceous cover exceeds 2 percent. Trees and shrubs do not exceed 10 percent cover. If less than 2 percent of the site is covered with herbaceous species, the site is considered barren
herbaceous layer	Any vegetative stratum of a plant community that is composed predominantly of herbs
HLPCO	DWR's Hydropower License Planning and Compliance Office
Holocene	An epoch of the Quaternary Period beginning 10,000 years ago and continuing today
hp	horsepower
HU	Hydrologic unit
hydric soil	A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation. Hydric soils that occur in areas having positive indicators of hydrophytic vegetation and wetland hydrology are wetland soils
hydrophytic vegetation	The sum total of macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. When hydrophytic vegetation comprises a community where indicators of hydric soils and wetland hydrology also occur, the area has wetland vegetation
igneous rock	Rock formed when molten rock (magma) that has cooled and solidified (crystallized). See intrusive (plutonic) and extrusive (volcanic) igneous rock
ILP	Integrated Licensing Process
Indian Tribe	Used in the NHPA and by FERC to mean an Indian community or group that is recognized by the federal government.

intermittent stream	A stream that has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from precipitation is a supplemental source of water for stream flow
intrusive rock	Igneous rock that cools and solidifies beneath the Earth's surface (= plutonic rock)
inundation	A condition in which water from any source temporarily or permanently covers a land surface
IPaC	Information for Planning and Conservation
ITA	Indian Trust Assets
IUCN	International Union for Conservation of Nature
jurisdictional determination	A process which identifies whether streams (and other waterbodies) within a project's boundaries meet the definition of "waters of the United States" or "waters of the State"
kV	kilovolt
kVA	kilovolt-amperes
L%	percentile distribution of sound levels
lacustrine system	Wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent mosses or lichens with greater than 30 percent areal coverage; and (3) total area exceeds 8 ha (20 acres)
LADWP	Los Angeles Department of Water and Power
lake	Permanent lakes or reservoirs greater than 2 surface hectares (5 surface acres)
landslide	Downslope movement of rock, soil, and mud
Ldn	day-night average sound level
Leq	equivalent sound level
limnetic	All deepwater habitats within the Lacustrine System; many small Lacustrine Systems have no Limnetic Subsystem.
lithification	The conversion of loose sediment into solid sedimentary rock. Several processes, including compaction of grains, filling of spaces between grains with mineral cement, and crystallization act to solidify sediment
M	magnitude of an earthquake on the Richter scale

mafic	A term used to describe minerals or igneous rocks that are rich in iron and/or magnesium. Mafic igneous rocks have a high percentage of dark-colored (mafic) minerals
magma	Molten rock. Magma may be completely liquid or a mixture of liquid rock, dissolved gases and crystals
magnitude	A measure of the total amount of energy released by an earthquake
marsh	An ecosystem of more or less continuously waterlogged soil dominated by emerged herbaceous plants, but without a surface accumulation of peat
MCL	maximum contaminant level
mcy	million cubic yards
mesic	Pertaining to conditions of moderate moisture or water supply; used of organisms occupying moist habitats
metamorphic rock	A rock that has undergone chemical or structural changes produced by increase in heat or pressure, or by replacement of elements by hot, chemically active fluids
mg	milligram
mg/L	milligram per liter
mineral	A naturally occurring chemical compound or limited mixture of chemical compounds. Minerals generally form crystals and have specific physical and chemical properties which can be used to identify them
ml	milliliter
MOU	Memorandum of Understanding
mph	miles per hour
MTBE	methyl tert-butyl ether
MVA	megavolt-amperes
MW	megawatts
MWA	Mojave Water Agency
MWD	Metropolitan Water District of Southern California
MUN	Municipal and Domestic Supply
mya	million years ago
NAHC	Native American Heritage Commission
NAS	Nonindigenous Aquatic Species (USGS location database)

Native Americans	Indigenous people who lived in the area prior to the arrival of Europeans. Encompasses all indigenous communities potentially interested in or affected by the relicensing, regardless of federal recognition.
NEPA	National Environmental Policy Act
NFFZ	North Frontal Fault Zone
NFS	National Forest System
NGO	non-governmental organization
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NMFS-S	listed by NMFS as a Species of Concern
NMWSE	Normal Maximum Water Surface Elevation
NNIP	non-native invasive plants
No.	Number
NO ₂	nitrogen dioxide
NOI	Notice of Intent to File an Application for a New License
NPDES	National Pollutant Discharge Elimination System
NPS	U.S. Department of the Interior, National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NTR	National Toxics Rule
NTU	Nephelometric Turbidity Unit
NWI	National Wetlands Inventory
O&M	Operations and Maintenance
O ₃	ozone
OA	open-air circulation
OEHHA	California Office of Environmental Health Hazard Assessment
OHP	Office of Historic Preservation under the California Department of Parks and Recreation
OHV	off-highway vehicle
OHWM	ordinary high water mark
Ordovician	A Period in the Paleozoic Era that includes the time interval from about 505 to 438 million years ago

outcrop	A mass of rock that appears at the Earth' surface
oxidation	Removal of electrons from an atom or ion. Usually by combining with oxygen ions. Minerals exposed to air may oxidize as a form of chemical weathering
P	phosphorus
PAC	USFS Protected Activity Center
PAD	Pre-Application Document
Paleozoic Era	Includes the time from about 570 - 245 million years ago.
palustrine system	All nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 percent. Also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres) ; (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2 m at low water; and (4) salinity due to ocean-derived salts less than 0.5 percent
parent rock	The preexisting rock from which a metamorphic rock forms
PCA	Pest Control Advisors
PCB	polychlorinated biphenyl
PCT	Pacific Crest National Scenic Trail
PFMA	Potential Failure Mode Analysis
PHG	Public Health Goals
PIT	passive integrated transponder
plant community	All of the plant populations occurring in a shared habitat or environment.
plate tectonics	The theory that the Earth's outer shell is made up of about a dozen lithospheric plates that move about and interact at their boundaries.
PM2.5	Fine particulate matter less than or up to 2.5 micrometers in diameter
PM10	Respirable Particulate Matter less than or up to 10 micrometers in diameter
PMF	probable maximum flood
ponded	A condition in which water stands in a closed depression. Water may be removed only by percolation, evaporation, and/or transpiration.

ppb	parts per billion
ppm	parts per million
ppt	parts per thousand
Privileged	For the purposes of the FERC's filing requirements, material deemed confidential by DWR will be filed with FERC as "Privileged." This information includes material, including, but not limited to, the location of sensitive cultural resources and the location of protected species, such as species listed as threatened or endangered under the Endangered Species Act, as well as business-sensitive information. Each page containing Privileged information will be so marked. DWR will not provide Privileged material to the public. Upon request, DWR will provide Privileged material to those agencies and Native American tribes with jurisdiction over the resources related to the Privileged material
Project	Devil Canyon Project
Project area	This is the area within the FERC Project boundary and the area immediately surrounding the FERC Project boundary
Project region	This is the area within the FERC Project boundary and the area surrounding the Project on the order of a county or National Forest
Project vicinity	This is the area within the FERC Project boundary and the area surrounding the Project on the order of a USGS 1:24,000 quadrangle
QAC	Qualified Applicators Certificate
Quaternary	The most recent Period of the Cenozoic Era. Encompasses the time interval of 1.6 million years ago through today
R.L.	reporting limit
REA	Ready for Environmental Analysis
REC-1	Water Contact Recreation
REC-2	Noncontact Water Recreation
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
Recreation Report	2015 FERC Form 80
regional metamorphism	Metamorphism affecting a large region that is associated with mountain building events
relicensing participants	FERC, federal and State agencies, Native American tribes, local governments, NGOs, businesses, members of the public, and others interested in the Project relicensing

riverine system	Includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts in excess of 0.5 percent
RNA	Recommended Research Natural Area
ROS	recreation opportunity spectrum
rpm	revolutions per minute
RWQCB	Regional Water Quality Control Board
sapling/shrub	A layer of vegetation composed of woody plants less than 3.0 inches in diameter at breast height but greater than 3.2 feet in height, exclusive of woody vines
SBNF	San Bernardino National Forest
SCADA	supervisory control and data acquisition
scarp	A cliff formed by faulting, erosion, or landslides. (Also called escarpment)
SCBC	Southern California Bass Council
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SCORP	California State Comprehensive Outdoor Recreation Plan
scrub	Vegetation characterized by shrubs; may be classified by habitat type or by characteristic species; shrubland.
SCUBA	self-contained underwater breathing apparatus
SE	California State endangered
sedimentary	Sedimentary rocks are formed from pre-existing rocks or pieces of once-living organisms. They form from deposits that accumulate on the Earth's surface. Sedimentary rocks often have distinctive layering or bedding
SEM	Schumachmeyer method
SHPO	State Historic Preservation Officer
shrub-dominated	Shrub canopy closure exceeds 10 percent. However, tree crown closure never exceeds more than 10 percent of the site
SIP	State Implementation Policy
SL	standard length
SM	Schnabel method

SMYLF	southern mountain yellow-legged frog
SO ₂	sulfur dioxide
SOPA	Survey on Public Opinions and Attitudes on Outdoor Recreation in California
SPME	Solid Phase Microextraction
SRA	State Recreation Area
SSC	Species of Special Concern
ST	California State threatened
State	State of California
submerged	rooted vascular plants which do not emerge above the water surface
substrate	The base or substance on which an attached species is growing
surface water	Water present above the substrate or soil surface
surficial deposit	Any loose, unconsolidated sedimentary deposit lying on bedrock
SVL	snout to vent length
SWAMP	Surface Water Ambient Monitoring Program
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAF	thousand acre-feet
TCP	Traditional Cultural Properties
TDS	total dissolved solids
tectonically active	A term used to describe regions that are strongly affected by movement of Earth's tectonic plates. Earthquakes and volcanoes are common features in these regions
Tertiary Period	The earliest Period of the Cenozoic Era, beginning about 66.4 million years ago and ending 1.6 million years ago
TLP	Traditional Licensing Process
TMDL	Total Maximum Daily Load
topography	The shape of the land surface
TR	Trouble Report
tree	A woody plant greater than 3.0 inches. in diameter at breast height, regardless of height (exclusive of woody vines)

tree-dominated	Tree canopy exceeds 10 percent crown closure, or young tree density indicates imminent tree dominance
U.S.	United States
U.S.C.	United States Code
unconsolidated	Loose sediment; lacking cohesion or cement
unconsolidated bottom	All wetland and deepwater habitats with at least 25 percent cover of particles smaller than stones, and a vegetative cover less than 30 percent
understory	The vegetation layer between the overstory or canopy and the ground-story of a forest community, formed by shade tolerant trees of moderate height
upland	Any area that does not qualify as a wetland because the associated hydrologic regime is not sufficiently wet to elicit development of vegetation, soils, and/or hydrologic characteristics associated with wetlands. Such areas occurring within floodplains are more appropriately termed non-wetlands
USACE	United States Army Corps of Engineers
USB	Universal Serial Bus
USDA	U.S. Department of Agriculture
USFS	U.S. Department of Agriculture, Forest Service
USFWS	U.S. Department of the Interior, Fish and Wildlife Service
USGS	United States Geological Survey
V	volts
VDL	Vista Del Lago
vegetation	The total plant life or cover in an area; also used as a general term for plant life; the assemblage of plant species in a given area
vegetation layer	A subunit of a plant community in which all component species exhibit the same growth form (e.g., trees, saplings/shrubs, herbs)
WARM	Warm Freshwater Habitat
wash	A normally dry stream bed that occasionally fills with water
weed	Any plant growing where it is not wanted
wetland boundary	The point on the ground at which a shift from wetlands to non-wetlands or aquatic habitats occurs. These boundaries usually follow contours

wetland determination	The process or procedure by which an area is adjudged a wetland or nonwetland
WHR	California Wildlife Habitat Relationships
WILD	Wildlife Habitat
WPLT	Western Pluvial Lakes Tradition
WQO	water quality objectives
WREM	Water Resources Engineering Memorandum
WSLFZ	West Silverwood Lake Fault Zone
xerophytic	A plant species that is typically adapted for life in conditions where a lack of water is a limiting factor for growth and/or reproduction. These species are capable of growth in extremely dry conditions as a result of morphological, physiological, and/or reproductive adaptations