

GLOSSARY - DEFINITION OF COMMONLY USED TERMS, ACRONYMS, AND ABBREVIATIONS

Term	Definition
A	
A	Ampere
AA	Federal Antiquities Act
Ac	Acre
ac-ft	acre-feet or acre-foot, the amount of water needed to cover one acre to a depth of one foot (43,560 cubic feet or 325,900 gallons)
ac-ft/yr	acre-feet per year
accretion flow	The incremental flow between two points. Also known as local inflow
ACEC	Area of Critical Environmental Concern
ACHP	Advisory Council on Historic Preservation
ACSR	Aluminum conductors steel reinforced
ADA	Americans with Disabilities Act
adit	An almost vertical pipe or short horizontal passage entering a tunnel, either to add water from a conduit, sluice or other water source, or as a maintenance access tunnel (also referred to as a portal)
AFRP	Anadromous Fish Restoration Program
afterbay	A reservoir located immediately downstream from a powerhouse, sometimes used to re-regulate flows to the river or stream
AGC	Automatic Generation Control used to support California electric regulation system
AIR	Additional Information Request issued by FERC
AIRFA	American Indian Religious Freedom Act
amsl	Above mean sea level
anabat	An electronic instrument used to detect and record high frequency vocalization of bats
annual maintenance	<p>Work performed to maintain serviceability, or repair failures during the year in which they occur. Includes preventive and/or cyclic maintenance performed in the year in which it is scheduled to occur. Unscheduled or catastrophic failures of components or assets may need to be repaired as a part of annual maintenance. There are three types of annual maintenance actions:</p> <p><i>Repair.</i> Work to restore a damaged, broken, or worn-out fixed asset, component, or item of equipment to normal operating condition. Repairs may be done as annual maintenance or deferred maintenance activities</p> <p><i>Preventive Maintenance.</i> Scheduled servicing, repairs, inspections, adjustments, and replacement of parts that result in fewer breakdowns and fewer premature replacements, and help achieve the expected life of the fixed asset. Inspections are a critical part of preventive maintenance as they provide the information for scheduling maintenance and evaluating its effectiveness.</p> <p><i>Cyclic Maintenance.</i> Preventive maintenance activities that recur on a periodic and scheduled cycle. Typical cyclic maintenance includes reproofing or repainting buildings, refinishing signs, etc. Cyclic maintenance schedules are normally adjusted depending upon the condition of the component or asset. If a roof has reached the scheduled time of replacement, but has remaining useful life, the maintenance may be delayed to utilize additional life.</p>
APE	Area of Potential Effect as pertaining to Section 106 of the National Historic Preservation Act
AR	American Rivers
AUM	Animal unit months
automatic/semi-automatic/manual powerhouses	An automatic powerhouse can be started, stopped, and have its load and voltage changed from a remote or master station via supervisory control. A semiautomatic powerhouse with SCADA may allow a remote station to change load and/or voltage, and may allow a remote shutdown, but must be started manually. A semi-automatic powerhouse without SCADA will send alarms to a remote or master station. A manual powerhouse must have all its functions performed at the powerhouse
AW	American Whitewater
B	
BA	Biological Assessment
BAOT	Boats at one time
baseload	Generation around-the-clock
Basin Plan	The RWQCB Water Quality Control Plan for the Sacramento and San Joaquin rivers
Bay-Delta	The San Francisco Bay-San Joaquin Delta Estuary
BBS	Breeding Bird Survey

Glossary (continued)

Term	Definition
BC	Before Christ
BDAC	Bay-Delta Advisory Committee
BDCP	Bay-Delta Conservation Plan
BEPA	Bald Eagle Protection Act
Black Start Capability	The ability of a unit to start up without the use of an external transmission or distribution voltage power source
BLM	U.S. Department of the Interior, Bureau of Land Management
BMI	Benthic Macroinvertebrates
BMP	Best Management Practice
BO	Biological Opinion
BOD	Biological oxygen demand
BOR	U.S. Department of the Interior, Bureau of Reclamation
BP	Before Present
BRM	Bedrock Milling Station
BSAI	BioSystems Analysis, Inc.
bypass flow	Bypass flows (cfs) are those flows that are required to be released into a stream.
C	
C	Centigrade
CAISO	California Independent System Operator
CALFED	Interagency committee with management and regulatory responsibility for Bay-Delta Estuary
Cal-IPC	California Invasive Plant Council
CalTrans	California Department of Transportation
capital improvement	The construction, installation, or assembly of a new fixed asset, or the significant alteration, expansion, or extension of an existing fixed asset to accommodate a change of purpose.
CCWD	Contra Costa Water District
CDBAW	California Department of Boating and Waterways
CDEC	California Data Exchange Center
CDF	California Department of Forestry and Fire Protection
CDFA	California Department of Food and Agriculture
CDFG	California Department of Fish and Game
CDPR	California Department of Parks and Recreation
CD-ROM	Compact Disc-Read-Only Memory
CDSOD	California Division of Safety of Dams within the CDWR
CDWR	California Department of Water Resources
CE	A species or subspecies listed as endangered under the California Endangered Species Act
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFBF	California Farm Bureau Federation
CFR	Code of Federal Regulations
Cf of ft ³	Cubic feet
cfs	Cubic feet per second. One cfs equals approximately 1.98 ac-ft per day.
CHRIS	California Historical Resources Information Center
CIPS	Commission Issuance Posting System
CL	Carapace length
cm	Centimeter
CMARP	Comprehensive Monitoring, Assessment, and Research Program
CNDDB	California Natural Diversity Data Base
CNPPA	California Native Plant Protection Act
CNPS	California Native Plant Society
CNPS-1A	Plant presumed by the CNPS to be extinct in California
CNPS-1B	Plant considered by the CNPS as rare or endangered in California and elsewhere
CNPS-2	Plant considered by the CNPS as rare or endangered in California but more common elsewhere
CNPS-3	Plant that requires more information by the CNPS before assigning to other lists – A review list
CNPS-4	Plant considered by the CNPS as plants of limited distribution
Commission	Federal Energy Regulatory Commission also referenced as FERC
component	A named data set in an operation model that is a building block for a condition.
conceptual design for recreation facilities	A conceptual design is the designer's initial communication to convey proposed design solutions. Conceptual designs for a facility may consist of diagrammatic sketches, bubble diagrams, line diagrams, preliminary floor plans, or renderings. A conceptual design is prepared prior to a site development plan. (Forest Service Handbook 7309.11, Chapter 30.)

Glossary (continued)

Term	Definition
condition	The main building block of a scenario, containing the data used by the operation model to simulate the system. At this time, the only condition that is defined by components is "Turbine Generator".
conduit	A pipe, flume or canal used for diverting or moving water from one point to another, usually used when there is no existing streambed or waterway
Control Area	An electric system bounded by interconnection metering and telemetry, capable of controlling generation to maintain its interchange schedule with other control areas and contributing to frequency regulation of the interconnection. A Control area operates its AGC on tie-line frequency bias.
CORP	California Outdoor Recreation Plan
CP	Species designated as protected under the CDFG sport fishing regulations as authorized by the California Code of Regulations, Title 14
CPUC	California Public Utility Commission
CR	A species or subspecies listed as rare under the California Endangered Species Act
CRMP	Cultural Resource Management Plan
CSBP	California Stream Bioassessment Procedure
CSPA	California Sportfishing Protection Alliance
CRWQCB	California Regional Water Quality Control Board
CSC	California Special Concern Species, an administrative designation by CDFG
CT	A species or subspecies listed as threatened under the California Endangered Species Act
cu yd or yd ³	Cubic yard
CVHJV	The California Central Valley Habitat Joint Venture
CVP	Federal Central Valley Project
CVPIA	Central Valley Project Improvement Act
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Federal Clean Water Act
CWHR	California Wildlife Habitat Relationships System
CWSC	California Water Services Company
CWT	Coded wire tags
D	
Dam Base Width or DBW	The width of the dam at its widest point along the foundation.
Dam Crest Elevation or DCE	The elevation of the lowest point along the crest.
Dam Crest Width of DCW	The width of the dam at the crest.
dam fish release requirement	The flow that must be released to the stream downstream of the dam; also known as minimum streamflow release requirement or bypass flow.
Dam Height or DH	The height of the dam from the crest (see below) to the stream channel at the downstream toe.
Dam Low Level Outlet Control	The type of gate and/or valve that controls the release from the low level outlet.
Dam Low Level Outlet Type	A description of the low level outlet facilities.
Dam Max Low Level Outlet Capacity	The flow that can be discharged through the low level outlet at the NMWS.
Dam Max Spillway Discharge	The maximum flow the spillway can pass with the water surface at the crest of the dam.
Dam Slope – Upstream Face	The slope of the upstream face of the dam.
Dam Slope – Downstream Face	The slope of the downstream face of the dam.
Dam Spillway Control	The type of device that controls the spillway.
Dam Spillway Crest Elevation	The elevation of the lowest point of the spillway.
Dam Spillway Type	The type of spillway.
Dam Type	A description of the type of dam.
Dam Year Placed in Service	The first calendar year water was impounded behind the dam.
dbh	diameter at breast height
DBP	Disinfection byproduct precursors
DDT	Dichlorodiphenyltrichloroethane. A chemical pesticide known to cause reproductive failure in various species of birds.
DEA	Draft environmental assessment
decommission	Demolition, dismantling, removal, obliteration and/or disposal of a deteriorated or otherwise unneeded asset or component, including necessary cleanup work. This action eliminates the deferred maintenance needs for the fixed asset. Portions of an asset or component may remain if they do not cause problems nor require maintenance.

Glossary (continued)

Term	Definition
deferred maintenance	Maintenance that was not performed when it should have been or when it was scheduled and which, therefore, was put off or delayed for a future period. There are three types of deferred maintenance actions: <u>Repair</u> . Work to restore a damaged, broken, or worn-out fixed asset, component, or item of equipment to normal operating condition. Repairs may be done as annual maintenance or deferred maintenance activities. <u>Rehabilitation</u> . Renovation or restoration of an existing fixed asset or any of its components in order to restore the functionality or life of the asset. Because there is no significant expansion or change of purpose for the fixed asset, the work primarily addresses deferred maintenance. <u>Replacement</u> . Substitution or exchange of an existing fixed asset or component with one having essentially the same capacity and purpose. Replacement eliminates deferred maintenance needs for the replaced fixed asset or component. The decision to replace a fixed asset or component is usually reached when replacement, rather than repair or rehabilitation, is more cost effective, more environmentally sound, or in the best interest of the government. The size or capacity of the existing fixed asset is not significantly expanded in a replacement. Replacement of an asset or component usually occurs when it nears has or exceeded its useful life.
DEIR	Draft Environmental Impact Report
DEIS	Draft Environmental Impact Statement
DEM	Digital Elevation Model – The format of the USGS digital elevation data sets containing elevation values that have been primarily derived from the USGS topographic map series.
dependable capacity	The maximum dependable output (in units of power, e.g. MW) of a generator or a group of generators under a combination of adverse hydrologic conditions and high electrical demand.
discharge	water released by a plant
Dispatch	A calculation that determines, given performance data for a specific plant, the most efficient way to divide flow among a plant's units.
distribution system	The substations, transformers and lines that convey electricity from high-power transmission lines to the consumer. Usually 115 kV and lower voltage.
DO	Dissolved oxygen
DOC	Dissolved organic carbon
DPS	Distinct Population Segment
Draft EA	Draft Environmental Assessment
Draft EIR	Draft Environmental Impact Report
DRP	Dispute Review Panel
E	
EA	Environmental Assessment
EAP	Emergency Action Plan
ECPA	Electric Consumers Protection Act
EDD	California Employment Development Department
EIA	Energy Information Administration
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
EPT	Orders of benthic insects: Ephemeroptera, Plecoptera, and Tricoptera
ESA	Federal Endangered Species Act
ESU	Evolutionarily significant unit
EVC	Existing Visual Condition
F	
F	Fahrenheit
FAC	Federal Advisory Committee
FACA	Federal Advisory Committee Act
FARM	Framework for Archaeological Research and Management of Forests of the North Central Sierra Nevada
FC	Federal Candidate Species; a species or subspecies currently proposed as a candidate for listing under the ESA
Fe	Iron
FE	A species or subspecies listed as endangered under the Federal Endangered Species Act
FEA	Final Environmental Assessment
FEMA	Federal Emergency Management Agency
FEPD	A federally-listed endangered species currently proposed for delisting from the ESA

Glossary (continued)

Term	Definition
FERC	Federal Energy Regulatory Commission
FERC Project Boundary	The area Licensee uses for normal Project operations and maintenance, and is shown on Exhibits G, J, and K of the current license.
FGDC	Federal Geographic Data Committee (FGDC) - Promotes the coordinated development, use, sharing, and dissemination of geographic data.
FHSA	Federal Historic Sites Act
FHWA	Federal Highway Administration
fixed asset	A constructed feature such as a building, road, campground, trail, or other item of infrastructure. Real property improvements. Facilities in the general sense.
fixed asset component	A subsystem, major item of equipment, or other portion of a fixed asset. Examples of components include: roof for a building, deck for a bridge, pavement for a road, interpretive kiosk at a viewing area, site furnishings (tables, grills, etc.) at a campground.
flashboards	Removable boards installed seasonally in reservoir spillways to temporarily increase storage capacity
flood elevation	The reservoir elevation at which the plant's reservoir spills.
FLPMA	Federal Land Policy and Management Act
flume	A lined structure, commonly made of wood, metal or concrete, used for conveyance of water, usually where no streambed exists or the topography is not suitable for a canal or tunnel.
FMP	Fire Management Plan
FMU	Fire Management Unit
forebay	A reservoir upstream from the powerhouse from which water is drawn into a tunnel or penstock for delivery to the powerhouse
Forest Service	U.S. Department of Agriculture, Forest Service
FOW	Forced Oil and Water Cooled
FP	A species or subspecies designated as "fully protected" under the CDFG Code
FPA	Federal Power Act
FPD	Federal Proposed Delisting; a federally listed species currently proposed for delisting from the ESA
fps	feet per second
FPT	A species or subspecies proposed for listing as either threatened or endangered under the federal endangered species Act.
Francis Turbine	A radial-inflow reaction turbine, where flow through the runner is radial to the turbine shaft
Frequency Regulation	The ability of a Control Area to assist the interconnected system in maintaining scheduled frequency.
FRRRPA	The Forest and Rangeland Renewable Resources Planning Act
FSC	Federal Species of Concern. An administrative designation by USFWS (former category 2 species)
FSM	Forest Service Manual
FSS	A species or subspecies designated as "sensitive" by the Forest Service
FSV	Species designated by the Sierra Nevada Framework as moderate to high vulnerability and species of concern.
FT	A species or subspecies listed as threatened under the Federal Endangered Species Act
ft	foot or feet
FTPD	A federally listed, threatened species currently proposed for delisting from the ESA
FWCA	Fish and Wildlife Coordination Act
G	
G	Giga
g	Gram
gate leakage	The amount of water that leaks through the wicket gates for each unit when the gates are closed.
generator	A machine powered by a turbine that converts rotating mechanical energy into electrical potential.
GIS	Geographic Information System
GMP	General Management Plan
gpd	gallons per day
gpm	gallons per minute
GPS	Global Positioning System
GRCD	Grasslands Resource Conservation District
Grizzly	A metal grating across the entry to a water conduit
gross head	The difference between the headwater elevation and the tailwater elevation.
GWh	Gigawatt hour (equals one million kilowatt hours)
H	
H	Horizontal

Glossary (continued)

Term	Definition
“H”-frame structure	A wood pole transmission structure that consists of two wood poles with a horizontal cross arm above the conductor
HA	Commercially or recreationally harvested species; non-protected species.
HABS	Historic American Building Survey
HABTAT	IFIM simulation model
HAER	Historic American Engineering Record
HCP	Habitat Conservation Plan
head	The vertical height of water that represents potential energy.
head loss	The amount of head that is lost (to friction, etc.) between the headwater (reservoir/forebay/intake) and the tailwater.
HEC-ResSim	United States Army Corps of Engineers - Hydrologic Engineering Center (USACE-HEC) Reservoir Simulation (HEC-ResSim) model, Version 3.0. Also referred to as ResSim.
HEP	Habitat Evaluation Procedures
HLCTS	Hydropower License Compliance Tracking System
hp	Horsepower
HPMP	Historic Properties Management Plan
hr	Hour
HREZ	Heritage Resource Emphasis Zones
HRMA	Heritage Resource Management Area
HSC	Habitat Suitability Criteria
HSI	Habitat Suitability Indices
HUC	Hydrologic unit codes developed by the Water Resources Council corresponding to hierarchal classification of hydrologic drainage basins in the United States. Each hydrologic unit is identified by a unique hydrologic unit code (HUC)
HVAC	Heating Ventilation and Air Conditioning System
Hz	Hertz (cycles per second)
I	
ICD	Initial Consultation Document, also known as PAD
IFIM	USFWS Instream Flow Incremental Methodology
IHA	Indicators of Hydrologic Alteration
ILP	Integrated Licensing Process
Immediate Vicinity	The area extending to about one mile out from a Project feature
In.	Inch
inflow	The flow water entering a plant’s reservoir.
Initial License	The first license for a project issued by FERC
Installed capacity	The nameplate MW rating of a generator or group of generators
Interchange	Electric power that flows from one entity to another.
Interested Parties	All governmental agencies, non-governmental organizations, Native American tribes, and unaffiliated members of the public that routinely participate in FERC relicensing in California or that have advised NID and/or PG&E that they wish to become involved in one or more of the relicensing proceedings. NID and PG&E are considered Interested Parties.
ITA	Indian Trust Asset
J	
JPS	Jimmerson-Gasper-Surface association, a soils classification
K	
K	kilometer: 1,000 meters
Kcfs	thousand cubic feet per second
kg	kilogram: 1,000 grams
kg/day	kilograms per day
kg/ha	kilograms per hectare
kg/yr	kilograms per year
km	Kilometer
kV	kilovolt: 1,000 volts
kVA	kilovolt amperes
KVP	Key View Point
kW	kilowatt: 1,000 watts
kWh	kilowatt-hour: 1,000 watt hours
L	
L	Liter
lb	Pound

Glossary (continued)

Term	Definition
LCMMP	Land coordinated Mapping and Monitoring Program
LEO	Law Enforcement Officer
level	reservoir surface elevation
level fluctuation	The change in reservoir surface elevation.
level fluctuation limits	A constraint specifying the number of feet allowed between the maximum elevation and minimum elevation achieved each day.
level fluctuation rates	A constraint specifying the maximum allowable rate of elevation change for the reservoir.
License Application	Application for a new license; submitted to FERC no less than two years in advance of expiration of an existing license.
Licensee	Yuba County Water Agency.
license term	The period for which a license is issued by FERC. Usually between 30 and 50 years.
load shapes	The daily schedule of power pricing and the hour duration of each price.
local inflow	The incremental inflow between two plants (also known as Accretion Flows).
LOP	Limited operating periods
LRMP	Land and Resource Management Plan
LWD	Large woody debris
M	
μ	Micro
μg	Microgram
μg/l	micrograms per liter (equals parts per billion, or ppb)
μmho/cm	micromhos per centimeter, a measurement of conductivity
M	Mega
m	meter
m	milli
mainstream plane	A plant located on the main stream that runs through the system. Not a plant on a side or tributary stream.
maintenance	The act of keeping fixed assets in acceptable condition. It includes preventive maintenance normal repairs, replacement of parts and structural components, and other activities needed to preserve a fixed asset so that it continues to provide acceptable service and achieves its expected life. Maintenance excludes activities aimed at expanding the capacity of an asset or otherwise upgrading it to serve needs different from, or significantly greater than those originally intended. Maintenance includes work needed to meet laws, regulations, codes, and other legal direction as long as the original intent or purpose of the fixed asset is not changed.
mbf	Million board feet
MBTA	Migratory Bird Treaty Act
MCA/T	Mandatory conditioning agencies/tribes
MCL	Maximum contaminant level
Meeting Participant	A Relicensing Participant that attends a specific meeting. Meeting Participants are different for each meeting.
metadata	"Data about data" - Describe the content, quality, condition, purpose and other characteristics of data.
mg	milligram
mg/l	milligrams per liter (equals parts per million, or ppm)
mgC/m ²	milligrams of carbon per square meter
mi	mile
mills/kWh	0.1 cent per kilowatt hour, equivalent to \$\$/mwh
minimum daily average flow	A constraint indicating the total volume of water that must be released from a plant in a day, expressed as a flow.
minimum elevation	The lowest allowable reservoir elevation. At elevations below the minimum, the operations model will set the daily discharge to 0 cfs
minimum flow unit	A small unit that is installed specifically to generate power from the minimum instantaneous flow when released through a low level outlet. Typically this unit is separate from the powerhouse, and therefore requires handling outside of the core scheduling routines.
minimum instantaneous flow	A constraint indicating the minimum flow of water that must be released from a plant at all times of the day. This flow is available for generation.
MIR	Minimal implementation requirement, a USFS system
MIS	Forest Service Management Indicator Species
mm	Millimeters
MNBMC	Species designated by the USFWS as a Migratory Bird of Management Concern because of: (1) Documented or apparent population declines; (2) small or restricted populations; or (3) dependence on restricted or vulnerable habitats.

Glossary (continued)

Term	Definition
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPN	Most probable number
mps	meters per second
MSCS	Multi-species Conservation Strategy
msl	mean sea level
must-run	Energy or ancillary services necessary to maintain system reliability
MVA	megavolt-ampere
MW	megawatt=1,000 kw
MWh	megawatt-hours=1,000 kwh
Mya	Million Years ago
N	
n	Nano
NAD 83	North American Datum 1983 – Based on a definition of the size and shape of the earth. It is the datum for map projections and coordinates within the United States and throughout North America.
NAGPRA	Native American Graves Protection and Reparation Act
NAHC	California Native American heritage Commission
natural inflow	The flow that a point in the system would have received if there were no upstream plants in the system. This flow is equal to the sum of all upstream accretion inflows. Also known as unimpaired or unregulated flows.
NCCP	Natural Conservation Plan
NCIC	North Central Information Center
NDA	no data available
NEPA	National Environmental Policy Act
NEPAct	National Energy Policy Act
new construction	The erection, construction, installation, or assembly of a new fixed asset.
New License	A license issued for a project for which FERC has issued an initial license
NFMA	National Forest Management Act
NGO	Non-Governmental Organizations
NGVD	National Geodetic Vertical Datum
NHA	National Hydropower Association
NHI	Natural Heritage Institute
NHPA	National Historic Preservation Act
NID	Nevada Irrigation District
NJE	Nanny-Jacksback-Esro association, a soil classification
NLT	No later than
NMFS	Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service
NOAA	Department of Commerce, National Oceanic and Atmospheric Administration
Normal operating capacity	The maximum MW output of a generator or group of generators under normal maximum head and flow conditions
NOI	Notice of Intent
NPDES	National Pollution Discharge Elimination System
NPN	Neuns-Ponto-Neer association, a soils classification
NPS	National Park Service
NRCS	Natural Resource Conservation Act
NRHP	National Register of Historical Places
NTU	Nephelometric turbidity unit
NWI	National Wetlands Inventory
NWS	National Weather Service
O	
O&M	operation and maintenance
OEP	FERC Office of Energy Projects (Formerly Office of Hydropower Licensing)
OGM	Obie-Goulder-Mounthat association, a soils classification
OHP	State Office of Historic Preservation
OHV	Off Highway Vehicle

Glossary (continued)

Term	Definition
operations	Activities related to the normal performance of the functions for which a fixed asset or component is intended to be used. Costs such as utilities (electricity, water, sewage), fuel, janitorial services, window cleaning, rodent and pest control, upkeep of grounds, vehicle rentals, waste management, and personnel costs for operating staff are generally included within the scope of operations and are not considered maintenance costs.
ORV	Off-road vehicle <i>or</i> Outstanding Remarkable Views
OS	Office of the Solicitor
Oz	Ounce
P	
P	Phosphorus
PA	Programmatic Agreement
PAC	Protected activity center
PAD	Pre-Application Document
PAD Questionnaire	Questionnaire developed and circulated by YCWA to gather existing, relevant and reasonably available information for inclusion in the Yuba River Development Project PAD.
PAOT	people at one time
PCT	Pacific Crest trail
PDF	Portable document format
peaking	Operation of generating facilities to meet maximum instantaneous electrical demands
penstock	An inclined pipe through which water flows from a forebay or tunnel to the powerhouse turbine
penstock capacity	The maximum design flow in the penstock.
penstock connections	The type of connections in the penstock both within the cans themselves and between cans.
penstock diameter	The nominal diameter of the penstock.
penstock length	The length of the penstock from the tunnel (see above) or upstream inlet to the turbine shut off valve (TSV).
maximum penstock velocity	The maximum velocity in the penstock at the "capacity" as defined above. This will occur at the smallest penstock diameter.
penstock supports	The type of supports for the penstock.
penstock type	A description of the type of pipe and whether the pipe is surface or buried.
pf	power factor
PG&E	Pacific Gas and Electric Company.
PH	Powerhouse
pH	The measure of the acidity or alkalinity of a substance or liquid
plant operation type	A reference to the manner in which water is scheduled through a plant. At this time there are six operating types: <u>Diversion Plant</u> – A plant that cannot control its daily release. A plant that uses an uncontrolled outlet to divert water from one watershed basin to another. <u>Fill and Spill</u> – A plant that peaks with the loadshape but gives priority to the upstream plant and will spill in order for the upstream plant to follow the loadshape as closely as possible. <u>Non-Generating</u> - A plant that peaks its discharge to follow the loadshape. <u>Strictly Peaking</u> - A plant that peaks its discharge. Attempts to schedule water in highest value periods of day. Can instantaneously (in a 15 minute increment) change load. <u>Peaking with Ramp Rates</u> – A plant where the water discharge still closely follows the load shape (plant will Peak); however, the plant is constrained by ramping rates. <u>Pure Run of River</u> – A plant where inflows are equal to outflows on an instantaneous basis. <u>Re-regulating</u> – A plant designed to regulate peaked discharge from upstream plants into smooth discharges. This plant releases constant outflows for the whole day. Re-regulating plants may or may not be constrained by ramping rates. If so, then they are required to ramp between days.
powerhouse maximum capability	Maximum megawatt output generated by the specific powerhouse. For powerhouses with 2 units, this value is the maximum simultaneous total output generated.
PHABSIM	Physical Habitat Simulation Models
PM&E	Protection, Mitigation & Enhancement
PM&E measure	A project facility, operation or management activity undertaken for the purpose of protecting or mitigating impacts that would result from continued project operation and maintenance, or for the purpose of enhancing resources that would be affected by continued Project O&M. (Also see Proposed PM&E measure)
PMF	Probable Maximum Flood
PMP	Probable Maximum Precipitation
PNF	Plumas National Forest
POAOR	California Public Opinion and Attitudes in Outdoor Recreation Survey
Posted File	A file that either NID or PG&E has placed on its respective Relicensing Website.

Glossary (continued)

Term	Definition
Power Factor	The ratio of actual power to apparent power. Power factor is the cosine of the phase angle difference between the current and voltage of a given phase. Unity power factor exists when the voltage and current are in phase
ppb	parts per billion
PPL	Pit-Pastolla-Lasvar association, a soils classification
ppm	parts per million
Project	YCWA's Yuba River Development Project, FERC Project No. 2246
Project Affected Area (PAA)	The geographic area in which a specific resource is potentially affected by Project presence, operation, or maintenance. The extent of the geographic area is dependant on the resource (i.e. water, recreation, or cultural resources.)
Project Area	The area within the FERC Project Boundary and the land immediately surrounding the FERC Project Boundary (<i>i.e.</i> , within about 0.25 mile of the FERC Project Boundary) and includes Project-affected reaches between facilities and downstream to the next major water controlling feature or structure, the United States Army Corps of Engineers' Daguerre Point Dam.
Project Drainage Basins	Combination of the Middle Yuba River, North Yuba River and Yuba River drainage basins.
Project Region	The area surrounding the Project in the order of a county or national forest.
Project Roads	Roads within Project boundary and constructed for Project purposes and necessary for project operation and maintenance
Project Vicinity	The area surrounding the Project in the order of a United States Geological Survey 1:24,000 topographic quadrangle.
Project Viewshed	The area from which project features are visible. The land base from which the project may be seen.
Project Works	All of the infrastructure associated with the operations of the project
Proposed PM&E Measure	A PM&E measure that is proposed by a Relicensing Participant to modify project facilities and operations and other management activities as conditions of the new license for the purpose of protecting a resource from or mitigating impacts that would result from continued project operations and maintenance, or for the purpose of enhancing resources that would be affected by continued project operation and maintenance.
protection	All of the relays and other equipment which are used to open the necessary circuit breakers to separate pieces of equipment from each other when trouble develops
protective relay	A device whose function is to detect defective lines or apparatus, or other power system conditions of an abnormal or dangerous nature, and to initiate appropriate control circuit action
PSEA	Pacific Service Employees Association
psi	pounds per square inch
PSR	Pacific Southwest Region of USFS
PURPA	Public Utilities Regulatory Policies Act
PWC	Personal water craft
PWD	Persons with Disabilities
PX	California Power Exchange
Q	
QF	A qualifying facility, a cogenerator or small power producer that sells its excess power to a utility
R	
ramping	The act of increasing or decreasing stream flows from a powerhouse, dam or diversion structure
ramping rates	Constraints on the rate at which a plant's discharge can change.
ramping rate curve	The river flow vs. stage curve relationship at the point where ramping rate compliance is measured.
RCA	Riparian Conservation Areas as defined by TNF
RCO	Riparian Conservation Objectives as defined by TNF
RD	Recreation Day, which equals a visit by a person to a Project development for recreation purposes during any portion of a 24-hour period
Reach	A stretch of stream between readily identifiable endpoints (such as structures or stream confluence).
Regulated hydrology	The hydrology of project-affected streams subsequent to construction of the project.
relicensing	The process of acquiring a new license for a project that has an existing license from FERC sometimes called the "Relicensings" if referred to collectively or the "Relicensing" if referred to individually.
Relicensing Contact List	List of Interested Parties that have provided to YCWA an e-mail address to which YCWA may forward information regarding the Relicensing. Also referred to as Contact List.
Relicensing Participants	Interested Parties, which includes YCWA, that routinely actively take part (<i>i.e.</i> , attend meetings/workshops and make filings) in the Relicensing proceedings
relicensing proceeding	Relicensing of YCWA's Yuba River Development. Sometimes referred to as the Relicensing.
reservoir	The water retained by a dam. Also referred to as headwater, storage, forebay, or headpond.

Glossary (continued)

Term	Definition
reservoir drainage area	The area that drains into the reservoir.
reservoir gross storage	Reservoir storage at maximum normal water surface elevation.
reservoir length	The distance between the two most distant points on the reservoir shore at normal maximum water surface elevation.
reservoir max storage capacity	The gross volume of water that can be stored in the reservoir.
reservoir NMWS elevation	Normal Maximum Water Surface - The elevation of the lowest spill crest if uncontrolled, the top of the gates for gates at the top of the dam.
reservoir surface area	The surface area of the reservoir at the normal maximum water surface elevation.
reservoir storage curve	A curve that defines a reservoir's volume in acre ft at various surface elevations.
reservoir useable capacity	A volume measurement of the amount of water that can be stored for generation, down to a minimum level
reservoir width	The maximum distance between the two most distant points on the reservoir shore at normal maximum water surface elevation taken at a right angle to the line at Reservoir Length.
ResSim	United States Army Corps of Engineers - Hydrologic Engineering Center (USACE-HEC) Reservoir Simulation (HEC-ResSim) model, Version 3.0. Also known as HEC-ResSim.
RIMS	Records & Information Management System
Riparian	Relating to the bank of a natural course of water
riparian vegetation	The vegetation immediately adjacent to a body of water. Typically a structurally diverse community consisting of herbaceous shrub, and woody components.
RM	River mile as measured along the river course, from downstream to upstream.
RNA/ACEC	Research Natural Area/Area of Critical Environmental Concern
ROD	Record of Decision
ROS	Recreation Opportunity Spectrum
ROW	Right-of-way
rpm	revolutions per minute
RRMP	Redding Resource Management Plan
RTD	Resistance temperature detector
RTU	Remote terminal unit or Remote telemetry unit. A remotely located piece of equipment used for collecting data and/or for operating equipment via SCADA
run-of-the-river	A hydro project that uses the flow of a stream with little or no reservoir capacity for storing water
RVD	Recreation Visitor Days
RWQCB	Regional Water Quality Control Board
S	
SCADA	Supervisory Control And Data Acquisition system
scenario	A collection of settings that constitutes a Res-Sim™ operation model run. Output data for a run are referenced by the scenario name.
SCORP	State Comprehensive Outdoor Recreation Plan
SD1	Scoping Document 1: A document issued by FERC summarizing the relicensing process for a Project; generally issued following the first public meeting after the NOI.
SE	A species or subspecies listed as endangered under the CESA
Secchi	A method of measuring surface water transparency in a reservoir
Section 106	Refers to section 106 of the National Historic Preservation Act
Section 401 Certification	Water quality certification issued by the SWRCB, the California agency responsible for administering Section 401 of the Clean Water Act
Setting	A collection of conditions that form the building blocks of a scenario. A setting is made up of conditions.
SFPP	South Feather Power Project
SFWPA	South Feather Water and Power Agency
SHPO	California Department of Parks and Recreation, Office of Historic Preservation, State Historic Preservation Officer
sidestream plant	A plant that is not on the main fork of the river. A plant that is located on a sidestream or minor tributary.
siphon	A pipe section of conduit that crosses a stream channel or ravine.
site development plan for recreation facilities	A site development plan depicts the logical and progressive establishment or replacement of improvement, buildings, pedestrian and vehicular circulation ways, and utilities needed for effective use of the site (not detailed construction drawings. Physical conditions, opportunities, needs, zoning and management objectives shape the site development plan. A site development plan consists of tow parts: a site survey plat and development plan. The site survey consists of the basic site information and all existing features. The development plan provides conceptual and specific proposed improvements. A site development plan is prepared after a conceptual design. (Forest Service Handbook 7309.11, Chapter 20.)

Glossary (continued)

SL	Standard Length
Sluice	An artificial channel for conducting water, with a valve or floodgate to regulate the flow
SM	Stream mile. See RM or River Mile
SMS	USFWS Scenery Management System
SMZ	Streamside Management Zone as defined by TNF
SNEP	Sierra Nevada Ecosystem Project
SNFPA	Sierra Nevada Forest Plan Amendment
SNTEMP	USFWS' Stream Network Temperature Model
SOHA	Spotted owl habitat areas
Special-Status Species	Species or subspecies listed under the FESA or CESA as endangered or threatened, or by a Federal or State agency as a species of special concern, sensitive species, fully protected species or management indicator species.
spill	Water passes over a spillway without going through the units
spill channel	Property down gradient from a conduit for which an easement over private property or withdrawal under FERC license has been granted. A spill channel is used when it becomes necessary to release water from a section of conduit.
spillway	A passage for releasing surplus water from a reservoir
spillway capacity curve	A curve that defines the maximum spill in cfs for the spillway at given reservoir elevations.
SPT	Sediment Pass-Through
sq ft or ft ²	square foot
sq mi or mi ²	square mile
SR	A species or subspecies listed as rare under the CESA
ST	A species or subspecies listed as threatened under the CESA
stage	The river surface elevation in feet based on a local datum
state	State of California
station use	Energy used to operate the generating facility's auxiliary equipment
STATSGO	State Soil Geographic Database
stoplogs	Removable logs installed seasonally in reservoir spillways to temporarily increase storage capacity.
STORET	USEPA's computerized water quality data storage system
Study Area	The geographic area covered by a specific study
Study Plan	The aggregate of all study descriptions
Study Proposal	A detailed description of an individual study.
SUP	Special Use Permit issued by the USFS
surge chamber	A structure, similar to a holding tank, located on a tunnel or penstock which is used to absorb and attenuate the overflow and prevent any disruption due to a sudden change in water pressure through a tunnel or penstock.
SWDU	Statement of Water Diversion and Use
switching center	The main control center for any given river system, which is responsible for operation of the automatic, semiautomatic and manual powerhouses on that river system. The Switching Center is staffed 24 hours a day
SWP	State Water Project
SWRCB	State Water Resources Control Board
T	
tailrace	Channel through which water is discharged from the powerhouse turbines
tailwater curve	A curve that defines the tailwater elevation of the range of powerhouse flows.
tailwater elevation	The elevation where all energy from the water passing the turbine had been extracted. (Can be the turbine centerline or the river surface elevation at the point of powerhouse discharge)
TCP	Traditional Cultural Property
TDS	total dissolved solids
T&E	Threatened or Endangered species as listed by either the ESA or CESAS.
THP	Timber Harvest Plan
three-winding transformer	A transformer with a primary, secondary and tertiary winding which may be used to connect generation with two different voltage transmission circuits, or with both distribution and transmission circuits, without the use of additional transformers
TLP	Traditional Licensing Procedure as defined by FERC regulations
TMDL	total maximum daily load
TN	total nitrogen
TNC	The Nature Conservancy
TNF	Tahoe National Forest
TNF LRMP	Tahoe National Forest Land Resources Management Plan
TOC	Total organic carbon

Glossary (continued)

Term	Definition
TP	total phosphorous
TPN	total persulfate nitrogen
trash rack	A mechanism, found on a dam or intake structure, which clears the water of debris before the water passes through the structure
TRP	Traditional Relicensing Procedure as defined by FERC regulations
TSP	total soluble phosphorus
TSS	total suspended solids
tunnel capacity	The maximum design flow in the tunnel.
tunnel diameter	The nominal design size of the tunnel.
tunnel length	The length of the tunnel from the upstream portal to the downstream portal.
tunnel lining	The type of lining in the tunnel, if any.
tunnel maximum tunnel velocity	The maximum velocity in the tunnel at the "capacity" and at the nominal diameter as defined above.
tunnel type	Either pressure or free flow.
turbine	A machine that converts the energy of a stream of water into the mechanical energy of rotation. This energy is then used to turn an electrical generator or other device. Also called a "water wheel"
TWD	Tailwater Depression Unit
U	
Unimpaired hydrology	Synthesized hydrology of Project-affected streams with no developments.
Unit	A term referring to the combined turbine-generator machine
Upper Basin	The river basin encompassing the North Fork of the Pit River and associated tributaries
US	United States
USACE	U.S. Department of Defense, Army Corps of Engineers
USBIA	U.S. Department of Interior, Bureau of Indian Affairs
USBLM	U.S. Department of Interior, Bureau of Land Management
USBOR	U.S. Department of Interior, Bureau of Reclamation
USBR	U.S. Bureau of Reclamation
USC	United States Code
USDA	U.S. Department of Agriculture
USDOC	U.S. Department of Commerce
USDOD	U.S. Department of Defense
USDOI	U.S. Department of Interior
USFS	U.S. Department of Agriculture, Forest Service
USFWS	U.S. Department of Interior, Fish and Wildlife Service
USGS	U.S. Department of Interior, Geological Survey
UTM	Universal Transverse Mercator – The map projection upon which the UTM Coordinate System is based.
V	
V	volts
VELB	Valley elderberry longhorn beetle
VFW	Veterans of Foreign Wars
VMS	USFS Visual Management System
VQO	Visual Quality Objectives, a USFS visual classification system
VQI	Visual Quality Index, a USFS visual classification system
VRM	Visual Resource Management
W	
W	watts
Watch List	A list prepared by an individual National Forest LRMP of plants and animal species that are locally rare, (as apposed to declining throughout their range), and are of public concern, occur as disjunct populations, are newly described taxa, or lacking sufficient information on population size, treats, trends or distribution. These species are not on the FSS list.
water withdrawals	Water that is withdrawn from the reservoir, not available for energy generation, which is lost from the system. Withdrawals can be either positive or negative.
WBWG	Bat species designated by the Western Bat Working Group as High Priority because they are imperiled or at high risk of imperilment
WHR	California Wildlife Habitat Relationships Database
WSEL	Water surface elevation
WSRA	Wild & Scenic Rivers Act
WUA	Weighted Usable Area

Glossary (continued)

Term	Definition
X	
Y	
Ya	Years ago
YCWA	Yuba County Water Agency
Yd	yard
YOY	young-of-the-year
Yuba County Water Agency	Licensee
Z	
Zn	Zinc