

UPPER NORTH FORK FEATHER RIVER PROJECT, FERC NO. 2105

GLOSSARY OF TERMS

<i>Term</i>	<i>Definition</i>
A	
A	Ampere
AA	Federal Antiquities Act
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)
Af	acre-foot, the amount of water needed to cover one acre to a depth of one foot
Afterbay	A reservoir located immediately downstream from a powerhouse, sometimes used to re-regulate flows to the river or stream
AFRP	Anadromous Fish Restoration Program
AGC	Automatic Generation Control (the ability to control the megawatt output of a given powerhouse from remote site, such as the ISO) used to support California electric regulation system
APE	Area of Potential Effect as pertaining to Section 106 of the National Historic Preservation Act
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
B	
Basin Plan	The RWQCB Water Quality Control Plan for the Sacramento and San Joaquin rivers
BEFS	Bald Eagle Fish Study
Belden Forebay Dam	Dam located at the South end of Belden Forebay
Belden Forebay	A 2,477 af reservoir on the NFFR serving as the forebay for the Oak Flat and Belden powerhouses
Belden Powerhouse	A 125 MW powerhouse located on the NFFR below Belden Dam.
Belden Siphon	A 12 ft. diameter above ground steel pipe, 1859 ft. long crossing the NFFR connecting the two tunnels conveying water to Belden Powerhouse
Black Start Capability	The ability of a unit to start up without the use of an external transmission or distribution voltage power source
BMP	Best Management Practice
BOD	biological oxygen demand
Butt Valley Dam	Dam located at the South end of Butt Valley Reservoir
Butt Valley Reservoir	A 49,900 af reservoir on Butt Creek.
Butt Valley Powerhouse	A 41 MW powerhouse located on Butt Creek at the North end of Butt Valley Reservoir.
C	
C	Celsius
Canyon Dam	See Lake Almanor Dam.
Caribou Powerhouse No. 1	A 75 MW powerhouse located below Butt Valley Reservoir.

<i>Term</i>	<i>Definition</i>
Caribou Powerhouse No. 2	A 120 MW powerhouse located below Butt Valley Reservoir.
CDFG	California Department of Fish and Game
CDPR	California Department of Parks and Recreation
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
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cf	cubic foot
cf/s	cubic feet per second
CNDDB	California Natural Diversity Data Base
CNPPA	California Native Plant Protection Act
CNPS	California Native Plant Society
CNPS-1A	Plants presumed to be extinct in California
CNPS-1B	Species considered by the CNPS as rare or endangered in California and elsewhere
CNPS-2	Species considered by the CNPS as rare or endangered in California but more common elsewhere
CNPS-3	Species that require more information before assigning to other lists – A review list
CNPS-4	Species considered by the CNPS as plants of limited distribution
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
CP	Amphibian and reptile species designated as protected under the CDFG sport fishing regulations as authorized by the California Code of Regulations, Title 14
CPUC	California Public Utilities Commission
CR	A species or subspecies listed as rare under the California Endangered Species Act
CSC	Special Concern Species, an administrative designation by CDFG
CT	A species or subspecies listed as threatened under the California Endangered Species Act
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Federal Clean Water Act
D	
dbh	diameter at breast height
DEA	draft environmental assessment
DEIR	Draft Environmental Impact Report
Distribution System	The substations, transformers and lines that convey electricity from high-power transmission lines to the consumer
DO	dissolved oxygen
DWR	California Department of Water Resources
E	
EA	Environmental Assessment
EAP	Emergency Action Plan
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ESA	Federal Endangered Species Act
EVC	Existing Visual Condition
F	
F	Fahrenheit
FAC	Federal Advisory Committee
FACA	Federal Advisory Committee Act
FE	A species or subspecies listed as endangered under the Federal Endangered Species Act

Glossary-2

<i>Term</i>	<i>Definition</i>
FEMA	Federal Emergency Management Agency
FEPD	A federally-listed endangered species currently proposed for delisting from the ESA
FERC	Federal Energy Regulatory Commission
FERC Project Boundary	The area surrounding Project facilities and features as delineated in Exhibit G or K of the FERC license.
Flashboards	Removable boards installed seasonally in reservoir spillways to temporarily increase storage capacity
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
Forebay	A reservoir upstream from the powerhouse, from which water is drawn into a tunnel or penstock for delivery to the powerhouse
FP	A species or subspecies designated as "fully protected" under the Calif. Fish & Game Code
FPA	Federal Power Act
Francis Turbine	A radial-inflow reaction turbine, where flow through the runner is radial to the turbine shaft
FSC	Special Concern Species, an administrative designation by USFWS (former category 2 species)
FSCD	First Stage Consultation Document, also known as Initial Consultation Document or ICD
FSS	A species or subspecies designated as "sensitive" by the USFS
FT	A species or subspecies listed as threatened under the Federal Endangered Species Act
Ft	Feet
FTPD	A federally listed, threatened species currently proposed for delisting from the ESA
FWCA	Fish and Wildlife Coordination Act
G	
g	Gram
GIS	Geographic Information System
Generator	A machine powered by a turbine that produces electric current
GWh	Gigawatt hour (equals one million kilowatt hours)
H	
HABTAT	IFIM simulation model
"H"-frame structure	A wood pole transmission structure that consists of two wood poles with a horizontal cross arm above the conductor
Hp	horsepower
hr	Hour
HSI	Habitat Suitability Indices
Hz	hertz (cycles per second)
I	
ICD	Initial Consultation Document, see FSCD
IFIM	USFWS Instream Flow Incremental Methodology
Immediate Vicinity	The area extending to about one mile out from Project features
in	Inch
ISO	California Independent System Operator
J	
K	
k	kilometer: 1,000 meters
kg	kilograms: 1,000 grams
kg/day	kilograms per day
kg/ha	kilograms per hectare
kg/yr.	kilograms per year
kV	kilovolts: 1,000 volts
kVA	Kilovolt amperes

<i>Term</i>	<i>Definition</i>
kW	kilowatts: 1,000 watts
kWh	Kilowatt-hour: 1,000 watt hours
L	
l	Liter
Lake Almanor	A 1,142,000 af reservoir on the North Fork Feather River which serves as the forebay for Butt Valley Powerhouse
Lake Almanor Dam	A dam located at the South end of Lake Almanor, also called Canyon Dam.
Licensee	Pacific Gas and Electric Company
M	
m	Meter
MBTA	Migratory Bird Treaty Act
MCL	maximum contaminant level
MDBM	Mount Diablo Based Meridian
MDL	minimum detection limit
μ	Micro
mgC/m ²	milligrams of carbon per square meter
μg/l	micrograms per liter
μmho/cm	micromohos per centimeter, a measurement of conductivity
mg/l	milligrams per liter
mi.	Mile
MIR	minimal implementation requirement, a USFS system
MIS	USFS Management Indicator Species
mm	Millimeters
Must-Run	Energy or ancillary services necessary to maintain system reliability
MVA	megavolt-ampere
MW	Megawatt
MWh	megawatt-hours
N	
ND	no data available
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
NGVD	National Geodetic Vertical Datum
NHI	Natural Heritage Institute
NHPA	National Historic Preservation Act
NMFS	Department of Commerce, National Marine Fisheries Service
NOI	Notice of Intent
NPS	National Parks Service
NRHP	National Register of Historical Places
NTU	nephelometric turbidity unit
NWI	National Wetlands Inventory
NWS	National Weather Service
O	
Oak Flat Powerhouse	A 1.3 MW powerhouse located at the base of Belden Forebay Dam.
P	
PAOT	People at one time
Peaking	Operation of generating facilities to meet maximum instantaneous electrical demands
Penstock	An inclined pressurized pipe through which water flows from a forebay or tunnel to the powerhouse turbine
pf	power factor

<i>Term</i>	<i>Definition</i>
PG&E Company	Pacific Gas and Electric Company, regulated utility subsidiary of PG&E Corporation
PH	Powerhouse
PMF	Probable maximum flood
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
Project	Upper North Fork Feather River Project facilities within the Project boundaries
Project Area	Zone of potential, reasonably direct impact. It usually extends 0 to 100 feet out from Project features.
Project Region	An area on the order of County or National Forest size
Project Vicinity	The area extending to about ten miles out from Project features
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
PSR	Pacific Southwest Region of USFS
PURPA	Public Utilities Regulatory Policies Act
Q	
QF	A qualifying facility, a cogenerator or small power producer that sells its excess power to a public utility
R	
ramping	The act of increasing or decreasing stream flows from a powerhouse, dam or diversion structure
relicensing	The process of acquiring a new license for a project that has an existing license from FERC
Reservoir Useable Capacity	A volume measurement of the amount of water that can be stored for generation, down to a minimum level
Riparian	Relating to the bank of a natural course of water
RM	River mile as measured along the river course
RNA/ACEC	Research Natural Area/Area of Critical Environmental Concern
rpm	revolutions per minute
RTU	Remote terminal unit. A remotely located piece of equipment used for collecting data and/or for operating equipment via SCADA
Run-of-the-River	A hydroelectric project that uses the flow of a stream with little or no reservoir capacity for storing water
RWQCB	Regional Water Quality Central Board
S	
SCADA	Supervisory Control And Data Acquisition system
SCORP	State Comprehensive Outdoor Recreation Plan
Secchi	A method of measuring surface transparency in a reservoir
SHPO	California Department of Parks and Recreation, Office of Historic Preservation, State Historic Preservation Officer
Sluice	An artificial channel for conducting water, with a valve or floodgate to regulate the flow
SMZ	Streamside Management Zone as defined by SNF
SNEP	Sierra Nevada Ecosystem Project
SNTEMP	USFWS' Stream 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.

<i>Term</i>	<i>Definition</i>
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
sq. ft	square foot
sq. mi.	square mile
State	State of California
Station Use	Energy used to operate the generating facility's auxiliary equipment
STORET	USEPA's computerized water quality data storage system
Study Area	The geographic area covered by a specific study
SUP	Special Use Permit issued by the Forest Service
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
SWRCB	State Water Resource Control Board
T	
Tailrace	Channel through which water is discharged from the powerhouse turbines
TDS	total dissolved solids
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
THP-G	total petroleum hydrocarbons as gas
TKN	total Kjeldahl nitrogen
TN	total nitrogen
TP	total phosphorous
Trash Rack	A mechanism, found on a dam or intake structure, which clears the water of debris before the water passes through the structure
TSS	total suspended solids
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"
U	
USBIA	U.S. Department of Interior, Bureau of Indian Affairs
USBLM	U.S. Department of Interior, Bureau of Land Management
USBR	U.S. Department of Interior, Bureau of Reclamation
USC	United States Code
USCOE	U.S. Department of Defense, Army Corps of Engineers
USDA	U.S. Department of Agriculture
USDI	U.S. Department of Interior
USEPA	U. S. Environmental Protection Agency
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
V	
V	Volts

Glossary-6

<i>Term</i>	<i>Definition</i>
VQO	Visual Quality Objectives, a USFS System
VQI	Visual Quality Index, a USFS System
W	
W	Watts
WHR	California Wildlife Habitat Relationships Database
WUA	Weighted Usable Area
X	
Y	
YOY	young-of-the-year (fish)
Z	
Zone of Potential Effect	Physical area in which the project has a potential for influence on resources. May be different for each resource area
ZPE	Zone of Potential Effect