Yuba County Water Agency's
Yuba River Development Project Relicensing

YUBA COUNTY WATER AGENCY

Yuba County Water Agency (YCWA), located in Marysville, California, is a public agency formed in 1959 pursuant to California State law (Water Code § 20500 *et seq.*). The provisions of the California Water Code, under which YCWA was formed (WC§§ 20500–29978; 22115), permit YCWA to generate, distribute and sell electricity.

YUBA RIVER DEVELOPMENT PROJECT

YCWA owns and operates the Yuba River Development Project, which is located in Yuba County, California, on the Yuba River and its tributaries including the North and Middle Yuba River and Oregon Creek. A portion of the area within the FERC Project Boundary is located on federally-owned land managed by the United States Department of Agriculture Forest Service as part of Plumas and Tahoe national forests.

YCWA holds the initial Federal Energy Regulatory Commission (FERC) license for the Project, which was issued to YCWA by the Federal Power Commission (FPC), FERC's predecessor, on May 16, 1963. On May 6, 1966, the FPC issued an order amending the initial license and making it effective from May 1, 1966 through April 30, 2016. The Project consists of three developments – New Colgate, New Bullards Fish Release, and Narrows 2 – which, in total, include: 1 main dam; 2 diversion dams; 4 water tunnels; 3 powerhouses with associated switchyards with a combined capacity of about 395 megawatts (MW); and appurtenant facilities and structures. The FERC-jurisdictional facilities that comprise each of the developments are described below.

Facilities and Features

- **NEW COLGATE DEVELOPMENT** consists of: (1) **Our House Diversion Dam**, a 130 foot-radius double curvature concrete arch dam located on the Middle Yuba River 12.0 miles upstream of its confluence with the North Yuba River. The dam is 70 feet high with a crest length of 368 feet and a crest elevation of 2,049 feet, and a drainage area of 144.8 square miles. The diversion dam has two outlets: a) a 5-foot diameter steel pipe controlled by a slide gate on the upstream face of the dam and with a maximum capacity of 800 cfs. (The outlet centerline is at elevation 1,990 feet, and the gate is operated by use of a portable motor.); and b) a 24-inch release pipe, with a maximum capacity of 60 cfs located just above the low-level outlet and controlled by a downstream gate valve operated by hand. The diversion dam has a spillway capacity of 60,000 cfs; (2) **Lohman Ridge Diversion Tunnel** is 12.5 feet high by 12.5 feet wide and diverts a maximum flow of 860 cfs through its 3.7 miles (90% unlined and 10% lined) length to Oregon Creek; (3) **Log Cabin Diversion Dam**, a 105 foot-radius concrete arch dam on Oregon Creek that has a drainage area of 29.1 square miles and a maximum spillway capacity of 12,000 cfs. The diversion dam has two outlets: a) a 5-foot diameter steel pipe controlled by a slide gate on the upstream face of the dam. (The outlet centerline is at elevation 1,938 feet and its maximum capacity is 800 cfs. The gate is operated by use of a portable motor.); and b) an 18-inch release pipe, with a maximum capacity of 13 cfs located above the low-level outlet and controlled by a downstream gate valve operated by hand; (4) **Camptonville Diversion Tunnel** is 6,107 feet long and has the capacity to transfer 1,100 cfs to New Bullards Bar Reservoir on the North Yuba River. The first 4,275 feet of the conduit is an unlined horseshoe tunnel 14.5 feet wide by 14.5 feet high becoming a lined horseshoe tunnel 11 feet 7 inches wide by 13 feet high for the remaining 1,832 feet; (5) **New Bullards Bar Reservoir** is a man-made storage reservoir on the North Yuba River formed by New Bullards Bar Dam. At normal maximum water surface elevation (1,956 ft), New Bullards Bar Reservoir extends about 15 miles upstream, has an estimated usable storage capacity of 966,103 ac-ft, a surface area of 4,790 acres, a shoreline of about 71.9 miles, and a drainage area of 488.6 square miles; (6) **New Bullards Bar Dam**, a 1,110 foot-radius double curvature concrete arch dam located on the North Yuba River about 2.3 miles upstream of its confluence with the Middle Yuba River. The dam is 645 feet high with a maximum elevation of 1,965 feet. The dam includes one low-level outlet - a 72 inch Hollow Jet Valve (Invert El. 1,395 ft) with a maximum design capacity of about 1,250 cfs at full pool; (7) **New Bullards Bar Dam Spillway** is an overflow type spillway with a width of 106 feet and a crest elevation of 1,902 feet. Control gates on the spillway consist of three Tainter Gates measuring 30 feet wide and 54 feet tall, and hoisted by 10 horsepower drum hoists. The maximum design capacity of the spillway is 160,000 cfs; (8) **New Colgate Power Tunnel and Penstock** is 5.2 miles long and composed of four different types; unlined horseshoe (26-ft square), lined horseshoe (20 ft wide and 14.5 ft high), lined circular (14 ft diameter) and 2,809 feet of steel penstock (diameter ranging from 9 - 14.5 ft). The tunnel and penstock have a maximum flow capacity of 3,500 cfs; (9) **New Colgate Powerhouse**, an above ground, steel reinforced concrete powerhouse located adjacent to the Yuba River houses two Voith Siemens Pelton type turbines with a capacity of 340 MW under a design head of 1,306 feet and a rated flow of 3,430 cfs; (10) **New Colgate Switchyard** located adjacent to New Colgate Powerhouse; (11) **Recreation Facilities** on New Bullards Bar Reservoir include Emerald Cove Marina, Hornswoggle Group Camp, Schoolhouse Family Camp, Dark Day Campground, Dark Day Boat Ramp, Garden Point Campground, French Point Campground and Madrone Cove Campground; and 12) **appurtenant facilities and features** including access roads within the FERC Project Boundary.

NEW BULLARDS BAR MINIMUM FLOW DEVELOPMENT consists of: (1) **New Bullards Bar Minimum Flow Powerhouse Penstock,** a 70 foot long, 12 inch diameter steel penstock with a maximum flow capacity of 5 cfs; (2) **New Bullards Bar Minimum Flow Powerhouse**, which includes a single Pelton type turbine with a capacity of 150 kilowatts at a flow of 5 cfs; (3) **New Bullards Bar Minimum Flow Transformer,** located adjacent to the New Bullards Bar Minimum Flow Powerhouse; and (4) **appurtenant facilities and features** including access roads within the FERC Project Boundary.

- **NARROWS 2 DEVELOPMENT** consists of: (1) **Narrows 2 Powerhouse Penstock** is a single rock tunnel, concrete lined (20 ft diameter) at the upper 376 feet and steel lined (14 ft diameter) for the final 371.5 feet. The penstock has a maximum flow capacity of 3,400 cfs; (2) **Narrows 2 Powerhouse,** an indoor powerhouse located at the base of the United States Army Corps of Engineer's (USACE) Englebright Dam. The powerhouse consists of one vertical axis Francis turbine with a capacity of 55 MW at a head of 236 feet and flow of 3,400 cfs; (3) **Narrows 2 Powerhouse Switchyard** located adjacent to the powerhouse; and (4) **appurtenant facilities and features** including access roads within the FERC Project Boundary.

Operations

YCWA operates the Project in conformance with the conditions in the existing FERC Project license, the USACE flood-control criteria, the conditions in YCWA's water-right permits and licenses and YCWA's 1966 Power Purchase Contract with Pacific Gas and Electric Company (PG&E). Besides these regulatory and contractual requirements, Project operations are affected by physical (*e.g.*, size of dams and tunnels) and hydrologic (*e.g.*, natural runoff) constraints, employee and public safety requirements and downstream water demands. The primary purposes of the Project are water supply, flood control, power generation, recreation and environmental protection and enhancement.

YCWA typically operates New Bullards Bar Reservoir by capturing winter and spring runoff from rain and snowmelt. Consequently, New Bullards Bar Reservoir normally reaches its peak storage at the end of the spring runoff season, and then is gradually drawn down until its lowest elevation is reached in mid-winter. The reservoir does not undergo significant daily changes in elevation, but it does experience a gradual lowering from the end of the spring runoff season through mid-winter. New Bullards Bar Reservoir has mandatory flood pool criteria from October through April that effect storage. The Our House and Log Cabin diversion dam impoundments have very little storage, and YCWA operates them primarily to divert water to New Bullards Bar Reservoir in spring during high flow periods.

YCWA operates New Colgate Powerhouse for peaking and the New Bullards Minimum Flow and Narrows powerhouses as base load facilities.

YUBA ACCORD

In 2005, YCWA and 16 other interested parties signed memoranda of understanding that specify the terms of the Lower Yuba River Accord (Yuba Accord), a comprehensive, consensus-based program to protect and enhance aquatic habitat in the Yuba River downstream of USACE's Englebright Dam. Following environmental review, YCWA executed the following four agreements in 2007, which together comprise the Yuba Accord: 1) the Lower Yuba River Fisheries Agreement, which specifies the Yuba Accord's Lower Yuba River minimum streamflows and creates a detailed fisheries monitoring and evaluation program; 2) the Water Purchase Agreement, under which the California Department of Water Resources purchases water, some of which is provided by the Yuba Accord's minimum streamflows, from YCWA for CALFED's Environmental Water Account (the first long-term acquisition of water by this program, which protects Bay/Delta fish and wildlife) and State Water Project and Central Valley Project contractors; 3) the Conjunctive Use Agreements with seven of YCWA's Member Units, which specify the terms of the Yuba Accord's groundwater conjunctive-use program; and 4) amendments to the 1966 Power Purchase Contract between YCWA and the PG&E.

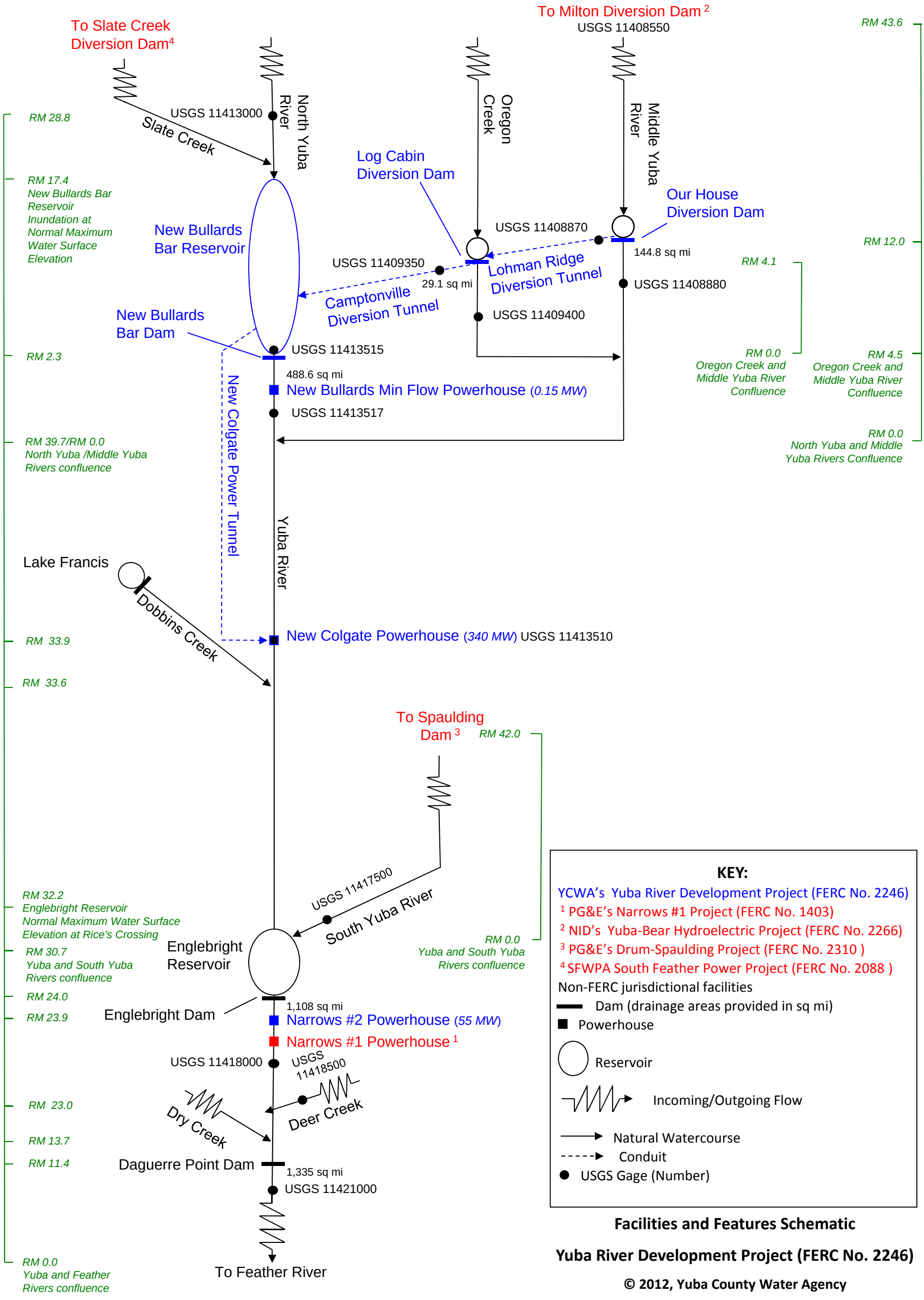
YCWA has been operating the Project in conformance with the Yuba Accord since 2006. The 2006, 2007 and early 2008 operations were under one-year pilot programs that were approved by the State Water Resources Control Board (SWRCB). On May 20, 2008, the SWRCB adopted its Corrected Order WR 2008-0014, which approved the long-term amendments to YCWA's water-right permits that were necessary so that YCWA may continue to implement the Yuba Accord.

For additional information regarding the Lower Yuba River Accord, refer to http://www.ycwa.com/projects/detail/8.

RELICENSING PROCESS

YCWA plans to prepare an application for new license in conformance with Title 18 of the Code of Federal Regulations, Chapter 1 (Federal Energy Regulatory Commission, Department of Energy), Subchapter B (Regulations under the Federal Power Act), Part 5 (Integrated License Application Process), commonly referred to as FERC's Integrated Licensing Process, or ILP.

For additional information regarding YCWA's Yuba River Development Project Relicensing, including a Relicensing Schedule, refer to YCWA's Yuba River Development Project Relicensing Website at www.ycwa-relicensing.com or contact Mr. Curt Aikens, General Manager, YCWA, at (530) 741-6278.



KEY:

YCWA's Yuba River Development Project (FERC No. 2246)

[1] PG&E's Narrows #1 Project (FERC No. 1403)

[2] NID's Yuba-Bear Hydroelectric Project (FERC No. 2266)

[3] PG&E's Drum-Spaulding Project (FERC No. 2310)

[4] SFWPA South Feather Power Project (FERC No. 2088)

Non-FERC jurisdictional facilities

Dam (drainage areas provided in sq mi)

Powerhouse

Reservoir

Incoming/Outgoing Flow

Natural Watercourse

Conduit

USGS Gage (Number)

Facilities and Features Schematic

Yuba River Development Project (FERC No. 2246)