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2.0 PURPOSE OF ACTION AND NEED FOR POWER

2.1 PURPOSE OF ACTION

The Federal Action to be considered by the Federal Energy Regulatory Commission (FERC or Commission) is the issuance of a new license to Placer County Water Agency (PCWA) for continued operation of the Middle Fork American River Project (MFP or Project) or some other disposition of the MFP under the Federal Power Act (FPA). If the Commission issues a new license, a key component is the conditions placed in the MFP license to ensure compliance with the FPA and other applicable laws. Ultimately, the Commission must determine that the Project, as licensed, in the judgment of the Commission, be best adapted to a comprehensive plan for improving or developing the waterway for beneficial public purposes. In addition to the power and development purposes for which licenses are issued, the Commission must give equal consideration to the purposes of energy conservation; protection, mitigation of damage to, and enhancement of fish and wildlife; protection of recreational opportunities; and preservation of other aspects of environmental quality.

This Exhibit E – Environmental Exhibit (Exhibit E) provides the information necessary for the Commission to develop the new license conditions for the MFP. The Exhibit E presents a description and analysis of the environmental and economic effects of the Proposed Action and the No-Action Alternative. Several other alternatives were considered in Exhibit E, but eliminated from detailed analysis because they are not considered reasonable, including: Federal Government takeover; issuance of a non-power license; and Project retirement (refer to Section 5.0 – Other Alternatives).

Some of the key Project-specific issues evaluated in Exhibit E include: (1) instream flow and reservoir minimum pool requirements; (2) sensitive species protection (3) vegetation and integrated pest management; (4) recreation enhancement; (5) cultural resource protection; (6) transportation system management; (7) sediment management; and (8) FERC boundary modifications.

2.2 NEED FOR POWER

PCWA is a public agency governed by an elected five-member Board of Directors. PCWA operates the MFP and carries out a broad range of responsibilities including water resource planning and management, retail and wholesale supply of irrigation and drinking water, and production of hydroelectric energy. PCWA is an independent generator (wholesaler of electricity) of power produced from the MFP. PCWA does not serve retail customers.

Hydroelectric power from the MFP is produced at five Project powerhouses with a total installed capacity of 223.7 megawatts (MW). The MFP produces an annual average of

1,039,078 megawatt-hours (MWh)¹. The total annual flow through the MFP and the resulting total annual generation are highly variable and depend on runoff and Northern California electrical demand.

PCWA's power output is currently sold to the Pacific Gas & Electric Company (PG&E) and on average produces enough clean, renewable energy to supply power to more than 100,000 homes. Per the MFP Power Purchase Contract, dated April 30, 1963, all electricity generated by the MFP is delivered to PG&E's transmission system at Project switchyards and substations, typically located near powerhouses. PG&E's transmission system is not part of the MFP. PCWA is currently negotiating a new power purchase contract, which will be in place prior to the expiration of the current PG&E contract. It is anticipated that the new contract will be from three to ten years in length. This power purchase contract will be consistent with the FERC license conditions, water rights, and existing operating agreements/contracts and will not result in additional limitations or constraints on Project operations.

Energy from the MFP is used to meet California's energy demand, renewable energy goals, and provide a source of energy with low greenhouse gas (GHG) emissions. The energy is used in the California-Mexico Power (CMP) Area of the Western Electricity Coordinating Council (WECC). The CMP Area encompasses most of California and the northern portion of Baja California in Mexico. The CMP is a summer peaking region that is heavily dependent on gas-fired generation. The WECC forecasts that peak demand and annual energy requirements will grow at the annual compound rate of 1.9% for the ten-year period of 2006 to 2015 (WECC 2006). WECC projections show that peak summer demand will rise from 46,814 MW in 2008 to 70,321 MW in 2015. With existing energy supplies, California has experienced a shortage of peak energy in certain years. Between 2000 and 2009 California experienced 39 Stage 3 emergencies (Cal-ISO 2010). A Stage 3 emergency authorizes utilities to initiate "rolling blackouts" to ease pressure on the transmission grid.

Continued operation of the MFP will provide hydroelectric generation to meet part of the regional power demand. Under the Proposed Action, the Project will continue to have an installed capacity of 223.7 MW and will generate an annual average of 991,384 MWh. Power generated by the MFP will continue to be used to help maintain reliable operations of the transmission grid by fine-tuning the flow of electricity in the grid to balance supply and demand.

The MFP includes three powerhouses (French Meadows, Hell Hole, and Oxbow powerhouses), which produce renewable energy as defined by the California Energy Commission (CEC). Combined, these powerhouses have an installed capacity of 22.13 MW and generate an annual average of 98,828 MWh. PCWA is an independent

¹Generation from French Meadows, Middle Fork, Ralston, and Oxbow powerhouses is averaged over a 40-year period of record (1967–2006) and Hell Hole Powerhouse is averaged over a 24-year period of record (1983–2006). The total average annual energy production represents the sum of the average net generation for the five Project powerhouses based on their respective period of record (refer to Table 3-16).

generator (wholesaler of electricity) that sells electricity to California's electrical retailers (e.g., PG&E). The retailers use this renewable energy to meet California's renewable energy goals defined in Senate Bill (SB) 1078 and SB 107. SB 1078 was signed into legislation in 2002 and requires California's electric retailers to procure 20% of the retail customer load with renewable energy by the year 2017. SB 107 was signed into legislation in 2006 accelerating the 20% renewable deadline (identified in SB 1078) to 2010, and requires the CEC to study and report the feasibility of expanding the renewable goal to 33% by 2020.

Power from the MFP is also low in GHG emissions. This power is used to meet California's GHG emission targets identified in Assembly Bill (AB) 32, SB 1368, and Executive Order S-3-05.

AB 32 requires the California Air Resources Board (CARB) to:

- Adopt early action measures to reduce GHG emissions;
- Establish a statewide GHG emissions cap for 2020 based on 1990 emissions (by January 1, 2008);
- Adopt mandatory reporting rules for significant GHG sources (on January 1, 2008);
- Adopt a scoping plan indicating how emission reductions will be achieved via regulations, market mechanisms, and other actions (on January 1, 2009); and
- Adopt regulations needed to achieve the maximum technologically feasible and cost-effective reductions in GHG emissions (by January 1, 2011).

SB 1368, signed into legislation in 2006, does not allow California electric utilities to enter into long-term commitments with base load power plants that exceed emission performance standards. In addition, Executive Order S-3-05 includes the following GHG emissions reduction targets: by 2010, reduce emissions to 2000 levels; by 2020, reduce emissions to 1990 levels; and by 2050, reduce emissions to 80% below 1990 levels.

In summary, power from the MFP is used to meet California's energy demand, renewable energy goals, and provides a source of energy with low GHG emissions.

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