

**DON PEDRO HYDROELECTRIC PROJECT  
FERC NO. 2299**

**AMENDMENT OF APPLICATION**

**EXHIBIT C – CONSTRUCTION HISTORY AND PROPOSED  
CONSTRUCTION SCHEDULE**



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## List of Acronyms and Abbreviations

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AFLA .....	Amendment to the Final License Application
CCSF.....	City and County of San Francisco
CFR.....	Code of Federal Regulations
Districts .....	Turlock Irrigation District and Modesto Irrigation District
FERC.....	Federal Energy Regulatory Commission
FLA.....	Final License Application
HPMP.....	Historic Properties Management Plan
IG .....	infiltration gallery
M&I.....	Municipal and Industrial
MID.....	Modesto Irrigation District
NEPA .....	National Environmental Policy Act
O&M.....	operation and maintenance
PM&E .....	Protection, Mitigation and Enhancement
RPM .....	Resource Protection Measure
RRMP .....	Recreation Resource Management Plan
TID.....	Turlock Irrigation District
Y.....	Year

## **EXHIBIT C - CONSTRUCTION HISTORY AND PROPOSED CONSTRUCTION SCHEDULE**

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The following excerpt from the Code of Federal Regulations (CFR) at 18 CFR § 4.51 (d) describes the required content of this Exhibit.

*Exhibit C is a construction history and proposed construction schedule for the project. The construction history and schedules must contain:*

- (1) If the application is for an initial license, a tabulated chronology of construction for the existing projects structures and facilities described under paragraph (b) of this section (Exhibit A), specifying for each structure or facility, to the extent possible, the actual or approximate dates (approximate dates must be identified as such) of:
  - (i) Commencement and completion of construction or installation;*
  - (ii) Commencement of commercial operation; and*
  - (iii) Any additions or modifications other than routine maintenance; and**
- (2) If any new development is proposed, a proposed schedule describing the necessary work and specifying the intervals following issuance of a license when the work would be commenced and completed.*

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## PREFACE

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On April 28, 2014, the co-licensees of the Don Pedro Hydroelectric Project, Turlock Irrigation District (TID) and Modesto Irrigation District (MID) (collectively, the Districts), timely filed with the Federal Energy Regulatory Commission (Commission or FERC) the Final License Application (FLA) for the Don Pedro Hydroelectric Project, FERC No. 2299. As noted in the filing and acknowledged by FERC at the time, several studies were ongoing which were likely to inform the development of additional protection, mitigation, and enhancement (PM&E) measures. The Districts have now completed these studies and herein submit this Amendment of Application (Amendment to the Final License Application or AFLA). For ease of review and reference, this AFLA replaces the Districts' April 2014 filing in its entirety.

The Don Pedro Project provides water storage for irrigation and municipal and industrial (M&I) use, flood control, hydroelectric generation, recreation, and natural resource protection (hereinafter, the "Don Pedro Project"). The environmental analysis contained in this AFLA considers all the components, facilities, operations, and maintenance that make up the Don Pedro Project and certain facilities proposed to be included under the new license. The Don Pedro Project is operated to fulfill the following primary purposes and needs: (1) to provide water supply for the Districts for irrigation of over 200,000 acres of Central Valley farmland and M&I use, (2) to provide flood control benefits along the Tuolumne and San Joaquin rivers, and (3) to provide a water banking arrangement for the benefit of the City and County of San Francisco (CCSF) and the 2.6 million people CCSF supplies in the Bay Area. The original license was issued in 1966. In 1995, the Districts entered into an agreement with a number of parties, which resulted in greater flows to the lower Tuolumne River for the protection of aquatic resources.

Hydroelectric generation is a secondary purpose of the Don Pedro Project. Hereinafter, the hydroelectric generation facilities, recreational facilities, and related operations will be referred to as the "Don Pedro Hydroelectric Project," or the "Project". With this AFLA to FERC, the Districts are seeking a new license to continue generating hydroelectric power and implement the Districts' proposed PM&E measures. Based on the information contained in this AFLA, and other sources of information on the record, FERC will consider whether, and under what conditions, to issue a new license for the continued generation of hydropower at the Districts' Don Pedro Project. The Districts are providing a complete description of the facilities and operation of the Don Pedro Project so the effects of the operation and maintenance of the hydroelectric facilities can be distinguished from the effects of the operation and maintenance activities of the overall Don Pedro Project's flood control and water supply/consumptive use purposes.

Being able to differentiate the effects of the hydropower operations from the effects of the flood control and consumptive use purposes and needs of the Don Pedro Project will aid in defining the scope and substance of reasonable PM&E alternatives. As FERC states in Scoping Document 2 in a discussion related to alternative project operation scenarios: "...alternatives that address the consumptive use of water in the Tuolumne River through construction of new structures or methods designed to alter or reduce consumptive use of water are...alternative mitigation strategies that could not replace the Don Pedro *hydroelectric* [emphasis added] project. As such, these recommended alternatives do not satisfy the National Environmental

Policy Act (NEPA) purpose and need for the proposed action and are not reasonable alternatives for the NEPA analysis.”

## **1.0 CONSTRUCTION HISTORY**

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Because 18 CFR § 4.51 (d)(1) requires a construction history only for applications for an initial license, a construction history is not required for this application for a new license for the Don Pedro Hydroelectric Project. For general information, however, it is useful to summarize that the construction of the new Don Pedro Project commenced in October 1967, reservoir filling began in November 1970, power generation commenced in early 1971, and the Don Pedro Project was formally dedicated in May 1971. It was not until March 1974 that the reservoir first filled to the beginning of the flood storage space of 801.9 ft.

In January 1985, the Districts filed an amendment with the Federal Energy Regulatory Commission (FERC) to add the fourth generating unit. FERC amended the license to authorize the construction of the fourth unit on February 2, 1987 (38 FERC ¶61,097). Construction of the fourth unit was completed in April 1989. Numerous capital improvements have occurred at the Project since commencement of operations, many of which involve improvements to the recreation facilities located on Don Pedro Reservoir. These are generally considered minor compared to the original construction and addition of the 4<sup>th</sup> Unit. The more recent of these capital improvements are discussed in Exhibit H of this AFLA.

## **2.0 PROPOSED CONSTRUCTION SCHEDULE**

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The Districts are proposing new capital construction projects and resource protection measures that include construction as part of this AFLA as follows:

- Course Sediment Management Program (RPM-1)
- Improve Instream Habitat Complexity (RPM-3)
- Gravel Cleaning (RPM-4)
- Complete Construction of Infiltration Gallery 1 and Construct Infiltration Gallery 2
- Construct Fish Counting and Barrier Weir (RPM-6)
- Superimposition Reduction Program (RPM-8)
- Fall-run Chinook Salmon Restoration Hatchery
- Cultural resource education projects to be located adjacent to the Don Pedro Reservoir (as part of the Historic Properties Management Plan)
- Improvements to whitewater boating river-egress at the Ward's Ferry Bridge (as part of the Recreation Resource Management Plan)

Annual costs associated with the capital improvement projects listed above are provided in Exhibit D to this AFLA. A schedule for completion of these projects is provided in Figure 2.0-1.

Amending the elevation of the Don Pedro minimum pool will require that approximately 24,000 cubic yards of riprap be placed on the upstream face of Don Pedro Dam. This work is currently estimated to cost \$5.3 million (2016 dollars).

The Districts also are proposing to replace and upgrade the existing Units 1, 2, and 3 turbine-generator equipment as described in Exhibit B of this AFLA. Within two years of the Districts' acceptance of the new license, the Districts will complete a final financial feasibility study using the best available information at the time related to equipment costs and value of electricity, including any renewable credits that may be available. If the upgrade continues to appear feasible, the Districts will proceed with final design, equipment specifications, model testing, manufacture, and installation of units. The complete upgrade will take five years once the final design is commenced. The upgrade is currently estimated to cost \$48.9 million (2016 dollars).

