

**LA GRANGE HYDROELECTRIC PROJECT
FERC NO. 14581**

FINAL LICENSE APPLICATION

EXHIBIT G – PROJECT BOUNDARY MAP



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EXHIBIT G – PROJECT BOUNDARY MAP

The following excerpt from the Code of Federal Regulations (CFR) at 18 CFR § 4.61(f) describes the required content of this Exhibit¹.

Exhibit G is a map of the project that must conform to the specifications of § 4.39. In addition to the other components of Exhibit G, the applicant must provide the project boundary data in a georeferenced electronic format – such as ArcView shape files, GeoMedia files, MapInfo files, or any similar format. The electronic boundary data must be potentially accurate to ± 40 ft, in order to comply with the National Map Accuracy Standards for maps at a 1:24,000 scale (the scale of the USGS quadrangle maps). The electronic exhibit G data must include a text file describing the map projection used (i.e., UTM, State Plane, Decimal Degrees, etc.), the map datum (i.e., North American 27, North American 83, etc.) and the units of measurement (i.e., feet, meters, miles, etc.). Three sets of the maps must be submitted on CD or other appropriate electronic media. If more than one sheet is used, for the paper maps, the sheets must be numbered consecutively, and each sheet must bear a small insert sketch showing the entire project and indicating that portion of the project depicted on that sheet. Each sheet must contain a minimum of three known reference points. The latitude and longitude coordinates, or state plane coordinates, of each reference point must be shown. If at any time after the application is filed there is any change in the project boundary, the applicant must submit, within 90 days following the completion of project construction, a final Exhibit G showing the extent of such changes. The map must show:

- (1) Location of the project and principal features. The map must show the location of the project as a whole with reference to the affected stream or other body of water and, if possible, to a nearby town or any other permanent monuments or objects, such as roads, transmission lines or other structures, that can be noted on the map and recognized in the field. The map must also show the relative locations and physical interrelationships of the principal project works and other features described under paragraph (b) of this section (Exhibit A).*
- (2) Project Boundary. The map must show a project boundary enclosing all project works and other features described under paragraph (b) of this section (Exhibit A) that are to be licensed. If accurate survey information is not available at the time the application is filed, the applicant must so state, and a tentative boundary may be submitted. The boundary must enclose only those lands necessary for operation and maintenance of the project and for other project purposes, such as recreation, shoreline control, or protection of environmental resources (see paragraph (f) of this section (Exhibit E)). Existing residential, commercial, or other structures may be included within the boundary only to the extent that underlying lands are needed for project purposes (e.g., for flowage, public recreation, shoreline control, or protection of environmental resources). If the boundary is on land covered by a public survey, ties must be shown on the map at sufficient points to permit accurate platting of the position of the boundary relative to the lines of the public land survey, the best available legal description of the*

¹ 18 CFR § 4.61(f) cross-references Exhibit G requirements published at 18 CFR § 4.41(h).

position of the boundary must be provided, including distances and directions from fixed monuments or physical features. The boundary must be described as follows:

- (i) *Impoundments.*
 - (A) *The boundary around a project impoundment must be described by one of the following:*
 - (1) *Contour lines, including the contour elevation (preferred method);*
 - (2) *Specified courses and distances (meets and bounds);*
 - (3) *If the project lands are covered by a public land survey, lines upon or parallel to the lines of the survey; or*
 - (4) *Any combination of the above methods.*
 - (B) *The boundary must be located no more than 200 feet (horizontal measurement) from the exterior margin of the reservoir, defined by the normal maximum surface elevation, except where deviations may be necessary in describing the boundary according to the above methods or where additional lands are necessary for project purposes, such as public recreation, shoreline control, or protection of environmental resources.*
 - (ii) *Continuous features. The boundary around linear (continuous) project features such as access roads, transmission lines, and conduits may be described by specified distances from center lines or offset lines of survey. The width of such corridors must not exceed 200 feet unless good cause is shown for a greater width. Several sections of a continuous feature may be shown on a single sheet with information showing the sequence of contiguous sections.*
 - (iii) *Noncontinuous features.*
 - (A) *The boundary around noncontinuous project works such as dams, spillways, and powerhouses must be described by one of the following:*
 - (1) *Contour lines;*
 - (2) *Specified courses and distances;*
 - (3) *If the project lands are covered by a public land survey, lines upon or parallel to the lines of the survey; or*
 - (4) *Any combination of the above methods.*
 - (B) *The boundary must enclose only those lands that are necessary for safe and efficient operation and maintenance of the project or for other specified project purposes, such as public recreation or protection of environmental resources.*
- (3) *Federal lands. Any public lands and reservations of the United States (Federal lands) [see 16 U.S.C. 796 (1) and (2)] that are within the project boundary, such as lands administered by the U.S. Forest Service, Bureau of Land Management, or National Park Service, or Indian tribal lands, and the boundaries of those Federal lands, must be identified as such on the map by:*
- (i) *Legal subdivisions of a public land survey of the affected area (a protraction of identified township and section lines is sufficient for this purpose); and*
 - (ii) *The Federal agency, identified by symbol or legend, that maintains or manages each identified subdivision of the public land survey within the project boundary;*
or

- (iii) *In the absence of a public land survey, the location of the Federal lands according to the distances and directions from fixed monuments or physical features. When a Federal survey monument or a Federal bench mark will be destroyed or rendered unusable by the construction of project works, at least two permanent, marked witness monuments or bench marks must be established at accessible points. The maps show the location (and elevation, for bench marks) of the survey monument or bench mark which will be destroyed or rendered unusable, as well as of the witness monuments or bench marks. Connecting courses and distances from the witness monuments or bench marks to the original must also be shown.*
- (iv) *The project location must include the most current information pertaining to affected federal lands as described under § 4.81(b)(5).*
- (4) *Non-Federal lands. For those lands within the project boundary not identified under paragraph (h)(3) of this section, the map must identify by legal subdivision:*
 - (i) *Lands owned in fee by the applicant and lands that the applicant plans to acquire in fee; and*
 - (ii) *Lands over which the applicant has acquired or plans to acquire rights to occupancy and use other than fee title, including rights acquired or to be acquired by easement or lease.*

PREFACE

Turlock Irrigation District (TID) and Modesto Irrigation District (MID) (collectively, the Districts) are filing this final application for an original license with the Federal Energy Regulatory Commission (Commission or FERC) for the existing La Grange Hydroelectric Project (Project) located on the Tuolumne River in the Central Valley of California. This Exhibit G, the Project Boundary of the Final License Application (FLA), is prepared in accordance with 18 CFR §4.61.

The following sections describe the La Grange Project facilities, including elements associated with hydropower generation (Project facilities) and non-Project features which are those operated by the Districts to achieve the primary purpose of the La Grange Project, which is diverting water for irrigation and municipal and industrial (M&I) uses. Hydroelectric generation is a secondary purpose of the La Grange Project. Water diversions at the La Grange Project are not dependent on the issuance of a FERC license and will occur with or without the licensing of the hydropower facilities.

1.0 PROJECT BOUNDARY MAP

This Exhibit G contains a map depicting the Project Boundary for the La Grange Hydroelectric Project in Exhibit G-1. The Exhibit G map has been prepared in accordance with FERC's regulations and shows the relative locations and physical relationships of the principal Project works within the proposed Project Boundary. The principal civil works and other features depicted on the Exhibit G map are described in detail in Exhibit A and Exhibit F of this Final License Application. The proposed Project Boundary shown on Exhibit G-1 is tentative and has not yet been surveyed by the Districts, as allowed by FERC regulations at 18 CFR §4.41(h)(2).

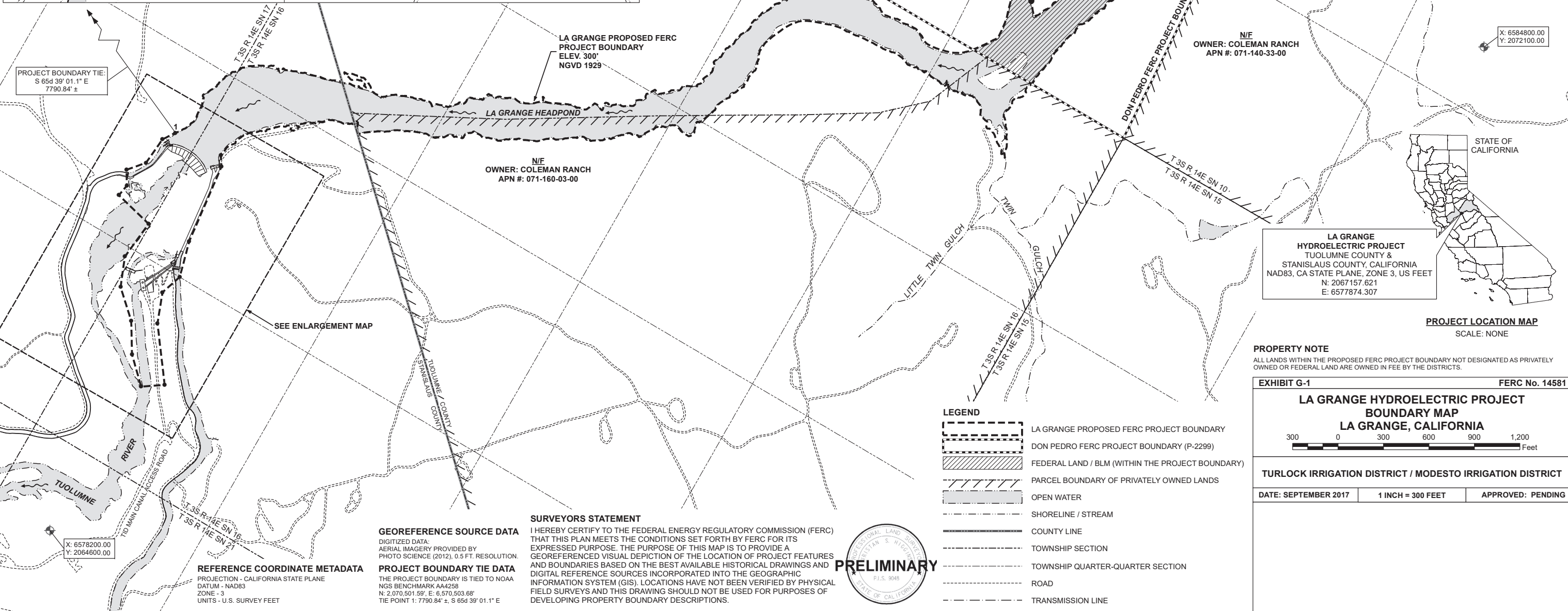
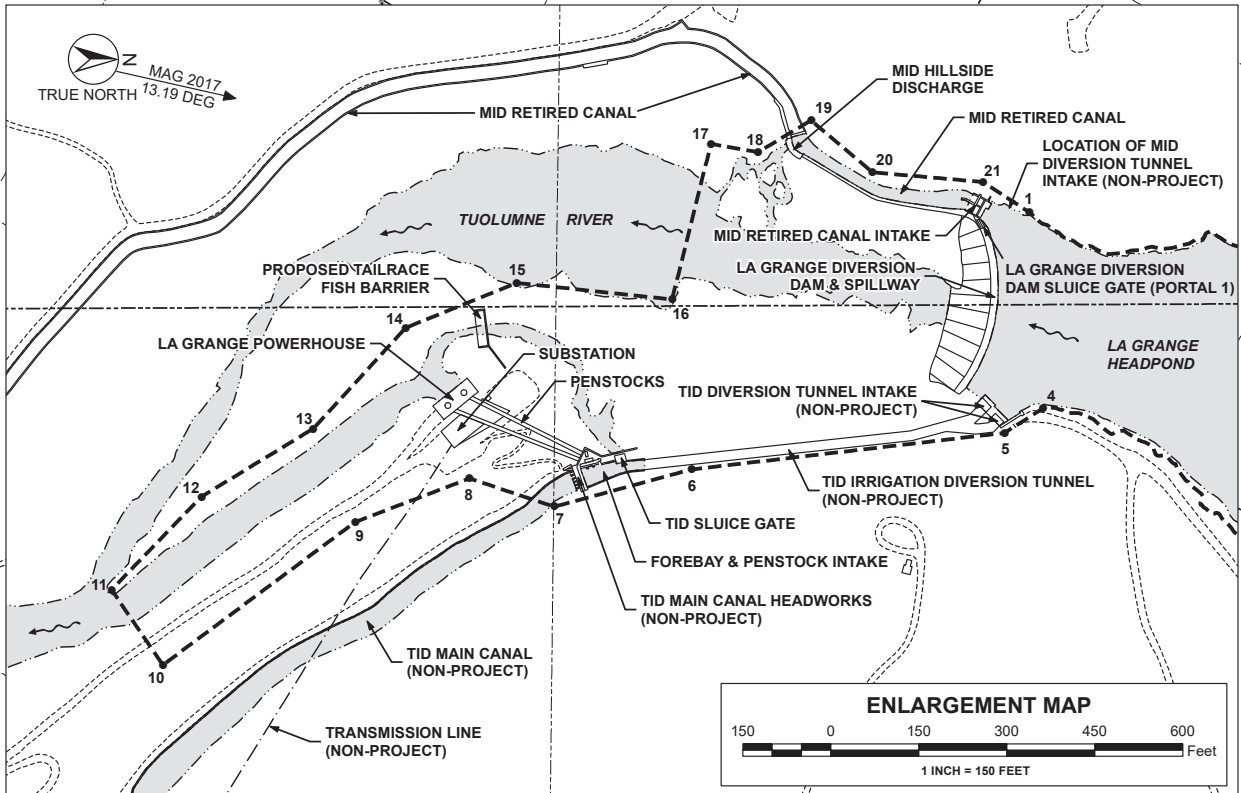
Appendix G-1 contains updated copies of FERC Form-587 identifying the Exhibit G Project Boundary maps associated with federal lands. The Project occupies approximately 13.98 acres of federal land within the Bureau of Land Management's (BLM) Sierra Resource Management Unit. In accordance with FERC regulations at 18 CFR §5.18(a)(3), the two landowners with property within the proposed Project Boundary, Coleman Ranch and the BLM, have been provided via certified mail with a copy of this Exhibit G, along with a transmittal letter that includes the names, business addresses, and telephone numbers of the applicants and a statement that this FLA has been filed with FERC.

**LA GRANGE HYDROELECTRIC PROJECT
FERC NO. 14581**

FINAL LICENSE APPLICATION

EXHIBIT G – PROJECT BOUNDARY MAPS

**EXHIBIT G-1
EXHIBIT G PROJECT BOUNDARY MAP**



PROJECT BOUNDARY TIE:
S 65d 39' 01.1" E
7790.84' ±

REFERENCE COORDINATE METADATA
PROJECTION - CALIFORNIA STATE PLANE
DATUM - NAD83
ZONE - 3
UNITS - U.S. SURVEY FEET

GEOREFERENCE SOURCE DATA
DIGITIZED DATA:
AERIAL IMAGERY PROVIDED BY
PHOTO SCIENCE (2012), 0.5 FT. RESOLUTION.

PROJECT BOUNDARY TIE DATA
THE PROJECT BOUNDARY IS TIED TO NOAA
NGS BENCHMARK AA4258
N: 2,070,501.59'; E: 6,570,503.68'
TIE POINT 1: 7790.84' ±, S 65d 39' 01.1" E

SURVEYORS STATEMENT
I HEREBY CERTIFY TO THE FEDERAL ENERGY REGULATORY COMMISSION (FERC) THAT THIS PLAN MEETS THE CONDITIONS SET FORTH BY FERC FOR ITS EXPRESSED PURPOSE. THE PURPOSE OF THIS MAP IS TO PROVIDE A GEOREFERENCED VISUAL DEPICTION OF THE LOCATION OF PROJECT FEATURES AND BOUNDARIES BASED ON THE BEST AVAILABLE HISTORICAL DRAWINGS AND DIGITAL REFERENCE SOURCES INCORPORATED INTO THE GEOGRAPHIC INFORMATION SYSTEM (GIS). LOCATIONS HAVE NOT BEEN VERIFIED BY PHYSICAL FIELD SURVEYS AND THIS DRAWING SHOULD NOT BE USED FOR PURPOSES OF DEVELOPING PROPERTY BOUNDARY DESCRIPTIONS.



- LEGEND**
- LA GRANGE PROPOSED FERC PROJECT BOUNDARY
 - DON PEDRO FERC PROJECT BOUNDARY (P-2299)
 - FEDERAL LAND / BLM (WITHIN THE PROJECT BOUNDARY)
 - PARCEL BOUNDARY OF PRIVATELY OWNED LANDS
 - OPEN WATER
 - SHORELINE / STREAM
 - COUNTY LINE
 - TOWNSHIP SECTION
 - TOWNSHIP QUARTER-QUARTER SECTION
 - ROAD
 - TRANSMISSION LINE

PROPERTY NOTE
ALL LANDS WITHIN THE PROPOSED FERC PROJECT BOUNDARY NOT DESIGNATED AS PRIVATELY OWNED OR FEDERAL LAND ARE OWNED IN FEE BY THE DISTRICTS.

EXHIBIT G-1 FERC No. 14581

**LA GRANGE HYDROELECTRIC PROJECT
BOUNDARY MAP
LA GRANGE, CALIFORNIA**

300 0 300 600 900 1,200
Feet

TURLOCK IRRIGATION DISTRICT / MODESTO IRRIGATION DISTRICT

DATE: SEPTEMBER 2017 1 INCH = 300 FEET APPROVED: PENDING

LA GRANGE HYDROELECTRIC PROJECT
TUOLUMNE COUNTY &
STANISLAUS COUNTY, CALIFORNIA
NAD83, CA STATE PLANE, ZONE 3, US FEET
N: 2067157.621
E: 6577874.307



N/E
OWNER: COLEMAN RANCH
APN #: 071-140-33-00

N/E
OWNER: COLEMAN RANCH
APN #: 071-160-03-00

LA GRANGE PROPOSED FERC
PROJECT BOUNDARY
ELEV. 300'
NGVD 1929

LA GRANGE PROPOSED FERC
PROJECT BOUNDARY
ELEV. 300'
NGVD 1929

APPROXIMATE LOCATION OF
PROPOSED FOOT TRAIL
TO HEADPOND

APPROXIMATE LOCATION OF
PROPOSED FOOT TRAIL TO HEADPOND

X: 6584800.00
Y: 2072100.00

X: 6579200.00
Y: 2071500.00

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**APPENDIX G-1
FERC FORM-587**

LAND DESCRIPTION

**Public Land States
 (Rectangular Survey System Lands)**

1. STATE California 2. FERC PROJECT NO. P-14581

3. TOWNSHIP 3S RANGE 14E MERIDIAN Mt. Diablo

4. Check one:

License
 Preliminary Permit

Check one:

Pending
 Issued

If preliminary permit is issued, give expiration date: _____

5. EXHIBIT SHEET NUMBERS OR LETTERS

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19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

6. contact's name Tim Bachelder

telephone no. (207.239.3874)

Date submitted October 11, 2017