

4. PURPOSE OF USE, DIVERSION/STORAGE AMOUNT AND SEASON

a. PURPOSE OF USE (irrigation, domestic, etc.)	DIRECT DIVERSION				STORAGE		
	AMOUNT		SEASON OF DIVERSION		AMOUNT	SEASON OF COLLECTION	
	Rate (cfs or gpd)*	Acre-feet per annum	Beginning date (month & day)	Ending date (month & day)	Acre-feet per annum	Beginning date (month & day)	Ending date (month & day)
Power	1,000 cfs	500,000	1-1	12-31			
	Total afa	500,000	Total afa				

See Attachment No. ____ * If rate is less than 0.025 cubic feet per second (cfs), use gallons per day (gpd).

b. Total combined amount taken by direct diversion and storage during any one year will be 500,000 acre-feet.

c. Reservoir storage is: onstream offstream underground (If underground storage, attach Underground Storage Form.)

d. County in which diversion is located: Tulare County in which water will be used: Tulare

5. SOURCES AND POINTS OF DIVERSION/REDIVERSION

a. Sources and Points of Diversion (POD)/Points of Rediversion (PORD):

- POD / PORD # 1 Kaweah River tributary to Tulare Lake thence _____
- POD / PORD # _____ tributary to _____ thence _____
- POD / PORD # _____ tributary to _____ thence _____
- POD / PORD # _____ tributary to _____ thence _____

If needed, attach additional pages, check box below and label attachment

See Attachment No. ____

b. State Planar and Public Land Survey Coordinate Description:

POD/ PORD #	CALIFORNIA COORDINATES (NAD 83)	ZONE	POINT IS WITHIN (40-acre subdivision)	SECTION	TOWN- SHIP	RANGE	BASE AND MERIDIAN
1	N. 2,035,496 E. 6,560,678	IV	NE ¼ of SW ¼	25	17S	27E	M.D.
			¼ of ¼				
			¼ of ¼				
			¼ of ¼				

If needed, attach additional pages, check box below and label attachment

See Attachment No. ____

c. Name of the post office most often used by those living near the proposed point(s) of diversion: Lemon Cove (93244)

6. WATER AVAILABILITY

- a. Have you attached a water availability analysis for this project? YES NO
 If NO, provide sufficient information to demonstrate that there is reasonable likelihood that unappropriated water is available for the proposed appropriation: If needed, attach additional pages, check box below and label attachment.
 The proposed project involves non-consumptive use of water already appropriated pursuant to existing water rights.

See Attachment No. 2

- b. Is your project located on a stream system declared to be fully appropriated by the State Water Resources Control Board (State Water Board) during your proposed season of diversion?
 YES NO
- c. In an average year, does the stream dry up at any point downstream of your project? YES NO
 If YES, during which months? Jan Feb Mar Apr May Jun Jul Aug Sep Oct
 Nov Dec See Attachment No. 2.
- d. What alternate sources of water are available if a portion of your requested diversion season must be excluded because water is not available for appropriation? (e.g., percolating groundwater, purchased water, etc.) If needed, attach additional pages, check box below and label attachment
 None

See Attachment No. 2

7. PLACE OF USE

a.

USE IS WITHIN (40-acre subdivision)	SECTION*	TOWNSHIP	RANGE	BASE & MERIDIAN	IF IRRIGATED	
					Acres	Presently cultivated?
SW 1/4 of SW 1/4	25	17S	27E	M.D.	N/A	<input type="checkbox"/> YES <input type="checkbox"/> NO
1/4 of 1/4						<input type="checkbox"/> YES <input type="checkbox"/> NO
1/4 of 1/4						<input type="checkbox"/> YES <input type="checkbox"/> NO
1/4 of 1/4						<input type="checkbox"/> YES <input type="checkbox"/> NO
1/4 of 1/4						<input type="checkbox"/> YES <input type="checkbox"/> NO
1/4 of 1/4						<input type="checkbox"/> YES <input type="checkbox"/> NO
1/4 of 1/4						<input type="checkbox"/> YES <input type="checkbox"/> NO
1/4 of 1/4						<input type="checkbox"/> YES <input type="checkbox"/> NO
Total Acres:						

*Please indicate if section is projected with a "(P)" following the section number.

See Attachment No. ___ Please provide the Assessor's Parcel Number(s) for the place of use:
 064-020-049-000

8. PROJECT SCHEDULE

Project is: proposed, partially complete or complete (Year completed - _____).

Extent of completion: not started

Estimated amount of time in years it will take for construction to be completed: Approximately 7 years

Estimated amount of time in years it will take for water to be put to full beneficial use: Approximately 17 years

9. JUSTIFICATION OF AMOUNTS REQUESTED

a. IRRIGATION: Maximum area to be irrigated in any one year: _____ acres.

CROP	ACRES	METHOD OF IRRIGATION (sprinklers, flooding, etc.)	WATER USE (Acre-foot/Yr.)	SEASON OF WATER USE	
				Beginning date (month & day)	Ending date (month & day)

See Attachment No. _____

b. DOMESTIC: Number of residences to be served: _____ Separately owned?
 YES NO Number of people to be served: _____ Estimated daily use per person is:
 _____ gallons per day Area of domestic lawns and gardens: _____ square feet
 Incidental domestic uses:

_____ (dust control area, number and kind of domestic animals, etc.)

a. STOCKWATERING: Kind of stock: _____ Maximum number: _____
 Describe type of operation: _____
 (feedlot, dairy, range, etc.)

d. RECREATIONAL: Type of recreation: Fishing Swimming Boating Other _____

e. MUNICIPAL:

POPULATION List for 5-year periods until use is completed		MAXIMUM MONTH		ANNUAL USE		
Period	Population	Average daily use (gallons per capita)	Rate of diversion (cfs)	Average daily use (gallons per capita)	Acre-foot (per capita)	Total (acre-feet)
Present						

See Attachment No. _____

Month of maximum use during year: _____
 Month of minimum use during year: _____

f. HEAT CONTROL: Area to be heat controlled: _____ net acres
 Type of crops protected: _____
 Rate at which water is applied to use: _____ gpm per acre
 Heat protection season will begin _____ and end _____
 (month and day) (month and day)

g. FROST PROTECTION: Area to be frost protected: _____ net acres
 Type of crops protected: _____
 Rate at which water is applied to use: _____ gpm per acre
 The frost protection season will begin _____ and end _____
 (month & day) (month & day)

h. INDUSTRIAL: Type of industry: _____

Basis for determination of amount of water needed: _____

- i. MINING: Name of the claim: _____ Patented Unpatented
 Nature of the mine: _____ Mineral(s) to be mined: _____
 Type of milling or processing: _____
 After use, the water will be discharged into _____ (watercourse)
 in _____ 1/4 of _____ 1/4 of Section _____, T _____, R _____, _____ B. & M.
- j. POWER: Total head to be utilized: 215, 211 and 211 feet, depending on the facility
 Maximum flow through the penstock: 700, 200 and 100 cfs Maximum theoretical horsepower capable of
 being generated by the works (cfs x fall ÷ 8.8): 24,300 (combined)
 Electrical capacity (hp x 0.746 x efficiency): 16,100 kilowatts at: 89 % efficiency
 After use, the water will be discharged into Kaweah River (watercourse)
 in SW 1/4 of SW 1/4 of Section 25, T 17S, R 27E, M.D. B&M. FERC No. _____ -See Attachment No. 3.
- k. FISH AND WILDLIFE PRESERVATION AND/OR ENHANCEMENT: List specific species and
 habitat type that will be preserved or enhanced: _____
- l. OTHER: Describe use: _____
 Basis for determination of amount of water needed: _____

10. DIVERSION AND DISTRIBUTION METHOD

- a. Diversion will be by gravity by means of: existing dam
 (dam, pipe in unobstructed channel, pipe through dam, siphon, weir, gate, etc.)
- b. Diversion will be by pumping from: _____
 (sump, offset well, channel, reservoir, etc)
 Pump discharge rate: _____ cfs or gpd Horsepower: _____
 Pump Efficiency: _____
- c. Conduit from diversion point to first lateral or to offstream storage reservoir:

CONDUIT (pipe or channel)	MATERIAL (type of pipe or channel lining; indicate if pipe is buried or not)	CROSS-SECTION (pipe diameter, or ditch depth and top and bottom width) (inches or feet)	LENGTH (feet)	TOTAL LIFT OR FALL		CAPACITY (cfs, gpd or gpm)
				feet	+ or -	
					-	
					-	

See Attachment No. _____

- d. Storage reservoirs: (For underground storage, complete and attach underground storage form)

RESERVOIR NAME OR NUMBER	DAM				RESERVOIR		
	Vertical height from downstream toe of slope to spillway level (feet)	Construction material	Length (feet)	Freeboard: dam height above spillway crest (feet)	Surface area when full (acres)	Capacity (acre-feet)	Maximum water depth (feet)
Lake Kaweah	215	Earth	2,375	35	2,154	183,250	213

See Attachment No. 1

e. Outlet pipe: Complete for storage reservoirs having a capacity of 10 acre-feet or more.

RESERVOIR NAME OR NUMBER	OUTLET PIPE				
	Diameter in inches	Length in feet	Fall: Vertical distance between entrance and exit of outlet pipe in feet	Head: Vertical distance from spillway to entrance of outlet pipe in feet	Dead Storage: Storage below entrance of outlet pipe in acre-feet
Lake Kaweah	144 to 120	1,700	71	143	7,471 (storage below entrance)
Lake Kaweah	36	1,300	21	192	116 (storage below entrance)
*					

See Attachment No. _____

*Note: The 153" diameter USACE main outlet is not included as part of the proposed power generation project.

e. If water will be stored and the reservoir is not at the point of diversion, the maximum rate of diversion to off-stream storage will be _____ cfs. Diversion to offstream storage will be made by:
 Pumping Gravity

11. CONSERVATION AND MONITORING

a. What methods will you use to conserve water? Explain.
 The proposed use of water is non-consumptive.

b. How will you monitor your diversion to be sure you are within the limits of your water right and you are not wasting water? Weir Meter Periodic sampling Other (describe)

12. RIGHT OF ACCESS

a. Does the applicant own all the land where the water will be diverted, transported and used?
 YES NO
 If NO, I do do not have a recorded easement or written authorization allowing me access.

b. List the names and mailing addresses of all affected landowners and state what steps are being taken to obtain access:
 U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, CA 95814

See Attachment No. _____

13. EXISTING WATER RIGHTS AND RELATED FILINGS

a. Do you claim an existing right for the use of all or part of the water sought by this application?
 YES NO

If YES, please specify: Riparian Pre-1914 Registration Permit License
 Percolating groundwater Adjudicated Other (specify) _____

b. For each existing right claimed, state the source, year of first use, purpose, season and location of the point of diversion (to within quarter-quarter section). Include number of registration, permit, license, or statement of water diversion and use, if applicable.

See Attachment No. _____

c. List any related applications, registrations, permits, or licenses located in the proposed place of use or that utilize the same point(s) of diversion.

Permit 19868 (A026607), S003165, S004993, A014861, A018915, E000010

See Attachment No. ____

14. OTHER SOURCES OF WATER

Are you presently using, or do you intend to use, purchased water or water supplied by contract in connection with this project? Yes No If yes, please explain: _____

15. MAP REQUIREMENTS

The Division cannot process your application without accurate information showing the source of water and location of water use. You must include a map with this application form that clearly indicates the quarter/quarter, section, township, range, and meridian of (1) the proposed points of diversion and (2) the place of use. A copy of a U.S.G.S. quadrangle/topographic map of your project area is preferred, and can be obtained from sporting goods stores or through the Internet at <http://topomaps.usgs.gov>. A certified engineering map is required when (1) appropriating more than three cubic feet per second by direct diversion, (2) constructing a dam which will be under the jurisdiction of the Division of Safety of Dams, (3) creating a reservoir with a surface area in excess of ten acres or (4) appropriating more than 1,000 acre-feet per annum by underground storage. See the instruction booklet for more information.

See Attachment No. 4

ENVIRONMENTAL INFORMATION

Note: Before a water right permit may be issued for your project, the State Water Board must consider the information contained in an environmental document prepared in compliance with the California Environmental Quality Act (CEQA). This form is not a CEQA document. If a CEQA document has not yet been prepared for your project, a determination must be made of who is responsible for its preparation. If the State Water Board is determined to be responsible for preparing the CEQA document, the applicant will be required to pay all costs associated with the environmental evaluation and preparation of the required documents. Please answer the following questions to the best of your ability and submit with this application any studies that have been conducted regarding the environmental evaluation of your project.

16. COUNTY PERMITS

a. Contact your county planning or public works department and provide the following information:

Person contacted: _____ Date of contact: _____

Department: Tulare County Resource Management Agency Telephone: (559) 624-7000

County Zoning Designation:

AF (Ag Foothill) and PDFM (Planned Development Foothill Mobile Home)

Are any county permits required for your project? YES NO If YES, check appropriate box below:

Grading permit Use permit Watercourse Obstruction permit Change of zoning
 General plan change Other (explain):

building permit and additional permits to be determined after Resource Management Agency review of use permit application

b. Have you obtained any of the required permits described above? YES NO

If YES, provide a complete copy of each permit obtained.

See Attachment No. ____

Attachments to Accompany
Water Right Application
Kaweah River Power Authority

Attachment #1

3. Project Description

Existing Facilities and Operation

The Kaweah River Power Authority (Applicant) owns and operates an existing 20 megawatt hydroelectric power plant (Unit 1) at Terminus Dam on Lake Kaweah in Tulare County. Lake Kaweah and Terminus Dam are owned and operated solely by the United States Army Corps of Engineers (USACE). Terminus Dam was constructed in 1962 with a gross pool of 150,000 acre-feet and enlarged in 2004 to bring Lake Kaweah to its current capacity of 185,630 acre-feet. Water is stored pursuant to State Water Resources Control Board Applications 14861 and 18915. Water is released by the USACE from storage for flood control purposes and to meet irrigation requirements of multiple claimants.

The Applicant currently operates the existing Unit 1 power plant at Terminus Dam to generate power from water released from Lake Kaweah. The existing Unit 1 power plant diverts water at a rate of up to 1,500 cfs, the maximum amount authorized by existing water right Permit 19868 (Application 26607). Release of water for power generation is subordinate to existing water rights and conforms to flood control purposes and irrigation demands. Because the existing releases from Lake Kaweah exceed the capacity of Unit 1 power plant, this project proposes the installation of three additional turbines to non-consumptively and beneficially use the excess released water above 1,500 cfs for power generation.

Proposed Project

This project is non-consumptive and does not propose the appropriation of a new water supply. The Applicant seeks to take advantage of existing flood control and irrigation releases from Lake Kaweah, in excess of the current capacity of Unit 1, which will be run through three new turbines for the purpose of power generation.

Water is currently released from Lake Kaweah through three outlet conduits: 1) a USACE main river conduit that discharges into the Kaweah River (not proposed to convey water for power generation); 2) a USACE secondary irrigation conduit that discharges into two irrigation ditches; and 3) the Applicant's penstock that conveys water to existing Unit 1 power plant, which then discharges into the Kaweah River.

The USACE main river conduit and the secondary irrigation conduit are concrete-lined and pass under the entire main dam. The USACE main river conduit is 12.75 feet in diameter and discharges into the Kaweah River adjacent to the existing Unit 1 power plant. The secondary irrigation conduit is 3 feet in diameter and currently discharges into two irrigation ditches adjacent to the main conduit outlet. The outlet that conveys water to existing Unit 1 is located in the left abutment of the dam and consists of a concrete-lined 12-foot diameter

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penstock that reduces to a 10-foot diameter steel-lined penstock roughly 230 feet downstream from the intake in Lake Kaweah.

Releases through the USACE conduits are controlled by gates on the lakeside of each conduit. Releases through the penstock flow through the Unit 1 turbine at flow magnitudes specified by the USACE. Located on the lakeside of the penstock is a gate that is either fully opened or fully closed and is not used to control metered releases.

The existing Unit 1 power plant has one 20 megawatt vertical Kaplan turbine and a tailrace with a variable water level that discharges to the river downstream from the existing USACE main outlet. The existing Unit 1 power plant is connected to the existing Southern California Edison 66 kilovolt electrical grid. The existing transmission lines are expected to be adequate to handle the additional power load from the proposed project and will be studied during the project development to determine that adequacy.

The proposed power generation facilities include power plant Unit 2, Unit 3 and Unit 4 (see map for location). The combined generating capacity of the three proposed facilities will be approximately 9 megawatts. The electrical output from the proposed generators will be delivered to an electrical switchyard, which will be constructed adjacent to the existing switchyard.

The proposed Unit 2 will be a 6 megawatt Francis turbine with a hydraulic capacity of up to 700 cfs. It will have a 470 foot long 6-foot diameter steel penstock branching from the existing penstock that currently serves Unit 1. The Unit 2 powerhouse will be a reinforced concrete structure, 50 feet by 40 feet in footprint and roughly 49 feet tall. It will have a tailrace that will discharge into the river approximately 75 feet downstream of the existing Unit 1 powerhouse.

The proposed Unit 3 will be a 2 megawatt Francis turbine with a hydraulic capacity of up to 200 cfs. It will be installed on the existing 3.5-foot diameter low flow conduit that bifurcates from the existing penstock that serves Unit 1. The Unit 3 turbine and the Unit 4 turbine will be contained within a single shared powerhouse. The powerhouse will be a reinforced concrete structure that has yet to be designed. It will have a tailrace that will discharge into the river approximately 50 feet upstream from the existing Unit 1 powerhouse tailrace.

The proposed Unit 4 will be a 1 megawatt Francis turbine with a hydraulic capacity of up to 100 cfs. It will be installed on an extension of the existing USACE 3-foot diameter conduit and will share a powerhouse with the Unit 3 turbine.

The existing Unit 1 and proposed Units 2, 3 and 4 will be accessible via existing roads. The project is located on lands of the United States that are owned and managed by the USACE. All excavated material will be stockpiled within existing rock disposal areas within 3,000 feet of the project site. All but one of these disposal sites is located on lands owned by the USACE. The

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project will not require the installation of any underground storage tanks or fuel tanks, nor will it require the storage of any hazardous materials.

Construction Plan

As currently conceived, construction will proceed in four phases, which collectively will take about 1 year. Access would occur over existing roads, and likely not require any modification to the roads. Applicant anticipates that the size of the construction crew on-site will average about 10-15 people, but could be about 30-40 during periods of heaviest construction. Each construction phase is briefly described below; although details may change as final design and selection of a contractor occurs.

In the first phase, site preparation would occur including ground disturbing activities to create a construction lay down area, expose the existing pipe for addition of the bifurcation, and prepare the area for addition of the new buildings. Excavated material would be piled on site for backfilling purposes in Phase 3.

Applicant anticipates that in the second phase, temporary bulkheads or cofferdams would be constructed. The bulkheads or cofferdams would isolate the construction work from the river. The area enclosed by the bulkheads or cofferdams would be minor. Then, standing water enclosed by the bulkheads or cofferdams would be allowed to settle, and pumped into the river. The area of the new powerhouses would be excavated down to the foundation level. The concrete foundation would then be placed, followed by the new walls of the powerhouses. The last portion of this phase would be installation of the turbines and generators. During this phase, the bifurcation and new penstocks would be installed as well.

In the third phase, the area would be backfilled around the new powerhouse walls using material that was excavated from the area in Phase 1, and stoplogs or a tailrace gates would be placed to stop water from entering the draft tubes. The bulkheads or cofferdams would then be removed. Backfilling around the new bifurcation and penstocks would also occur during this phase.

In the fourth phase, the remainder of the powerhouse and substation equipment would be installed and the roof of the powerhouses completed. Equipment testing would occur during this phase. In this phase, site clean-up and remediation would occur including stabilizing all slopes and finalizing drainage and paving of the road and access areas, as needed. Any excess clean material (e.g., excavated dirt) or construction material would be properly disposed of off-site. Final as-built drawings would be prepared and filed with FERC.

Prior to any ground disturbing activities, Applicant and/or its contractor would obtain all necessary approvals/permits for construction.

Attachment #2

6. Water Availability

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The Applicant is aware that the Kaweah River has been determined to be fully appropriated pursuant to SWRCB Order WR 98-08. This project is non-consumptive and will not involve diversion of any water that has not already been appropriated under the aforementioned rights. The proposed power generation project will only utilize, for beneficial use, water that is being released from storage to meet irrigation and flood control requirements. The Applicant has no control over the amount or timing of the releases and will continue to be subordinate to releases made for either flood control or irrigation. Therefore, no water availability analysis has been included for this project.

The Kaweah River is a tributary of Tulare Lake. Due to the size of the Kaweah watershed and the variability of precipitation and snowfall, there are points downstream of the proposed project that historically and currently dry up. Computed from the United State Army Corps of Engineers 1904 to 2011 data on inflow to Lake Kaweah, the Kaweah watershed has an average run-off of 428,553 acre-feet with a recorded low of 94,408 acre-feet (1977) and a recorded high of 1,359,142 acre-feet (1983).

The proposed project will not decrease downstream flows, and power generation will not alter the timing or the amount of irrigation and flood control releases from Lake Kaweah. The project would merely utilize the kinetic energy of existing flows for the non-consumptive purpose of power generation. Therefore, the project will neither affect the amount of downstream flows, nor will the project result in any injury to the prior rights of downstream diverters.

Attachment #3

9.j. FERC License

The Applicant will first be seeking a preliminary permit from FERC for this project.

Attachment #4

15. Drawings - See separate attachment.

Attachment #5

17.b. State/Federal Permits and Requirements

Agency	Permit Type
DFG	LSAA
FERC	Hydropower Project
USACE	Section 404
SWRCB	Section 401