

Project Facility Specifications.

KAWEAH NO. 1 DEVELOPMENT

DIVERSION	
Dam	
Type	overflow concrete gravity dam
Height of Dam Crest above Streambed	6 feet
Dam Crest Length	20 feet
Volume	80 cubic feet
Elevation of Dam Crest	2,583 feet
Elevation of Streambed	2,577 feet
Outlet Works	
Type	unlined tunnel
Dimensions	50-feet long x 3-feet wide x 6-feet high
Control	manually operated slide gate
Maximum Capacity	24 cfs
Sandbox (Sediment Trap)	
Elevation of Spillway Crest	2,580 feet
Control	36-inch x 36-inch slide gate
Spillway	
Type	Overflow concrete
Width	30 feet
Capacity	50 cfs
FLOWLINE	
Type	steel flume
Length	30,723 feet
Maximum Diversion Capacity	24 cfs
Invert Gradient	29 feet/mile
FOREBAY TANK	
Type	steel
Diameter	24 feet
Capacity	0.18 ac-ft
Discharge	directly into penstock
PENSTOCK	
Type	buried steel
Length	3,340 feet
Diameter	varies from 48-19 inches
POWERHOUSE	
Installed Capacity, Generator	2.25 MW
Type of Turbine	Allis-Chalmers Impulse Turbine
Horsepower	3,790
Design Head	1,260 feet
R.P.M.	600
Minimum Load	150 kW with 2.5 cfs
Maximum Hydraulic Capacity	24 cfs
Maximum Tail Water Surface	60 square feet
Minimum Tail Water Surface	60 square feet
Elevation Runner	1,166 feet
Tailrace Structure/Length	Rectangular flume 10 feet x 6 feet

Project Facility Specifications (continued).

KAWEAH NO. 2 DEVELOPMENT

DIVERSION	
Dam	
Type	overflow masonry gravity dam
Height of Dam Crest above Streambed	7 feet
Dam Crest Length:	
Right Section	100 feet
Middle Section	13 feet
Left Section	48 feet
Volume	2,500 cubic feet
Elevation of Spillway Crest:	
Right Section	1,360 feet
Middle Section	1,366 feet
Left Section	1,363 feet
Elevation of Streambed	1,358 feet
Outlet Works	
Type	concrete tunnel
Dimensions	12.5-foot long x 10-foot wide x 10-foot high
Control	dual 48-inch motor operated slide gates
Tunnel Discharge Pipe:	
Type	steel
Length	42 feet
Diameter	54 inches
Control	manually operated slide gate
Maximum Capacity	100 cfs
FLOWLINE	
Type:	
Segment 1	steel flume
Segment 2	steel pipe
Segment 3	concrete ditch
Length:	
Segment 1	3,822 feet x 7-foot wide
Segment 2	1,047-foot long x 50-inch diameter
Segment 3	16,738-foot long x 12-foot wide
Maximum Diversion Capacity	87 cfs
Invert Gradient	11.5 feet/mile
FOREBAY	
Type	concrete-lined
Dimensions	180-foot long x 13-foot wide x 14-foot deep
Capacity	0.75 ac-ft
Discharge	directly into penstock
PENSTOCK	
Type	buried steel
Length	1,012 feet
Diameter	varies from 60-34 inches

Project Facility Specifications (continued).

KAWEAH NO. 2 DEVELOPMENT (continued)

POWERHOUSE	
Installed Capacity, Generator	1.8 MW
Type of Turbine	Francis
Horsepower	2,900
Design Head	344 feet
R.P.M.	720
Minimum Load	150 kW with 13 cfs
Maximum Hydraulic Capacity	82 cfs
Maximum Tail Water Surface	1,600 square feet
Minimum Tail Water Surface	1,600 square feet
Elevation Runner	978 feet
Tailrace Structure/Length	Rectangular flume 20 feet x 80 feet

KAWEAH NO. 3 DEVELOPMENT

FLOWLINE	
Type	concrete box flume
Length	2,580 feet
Maximum Diversion Capacity	97 cfs
Invert Gradient	6.6 feet/mile
FOREBAY	
Type	embankment
Capacity	11 ac-ft
Discharge	drainage channel
PENSTOCK	
Type	buried steel
Length	3,151 feet
Diameter	varies from 42-36 inches
POWERHOUSE	
Installed Capacity, Generators:	
Unit 1	2.4 MW
Unit 2	2.4 MW
Type of Turbine:	
Unit 1	Pelton – Double Impulse Turbine
Unit 2	Pelton – Double Impulse Turbine
Horsepower:	
Unit 1	3,000
Unit 2	3,000
Design Head:	
Unit 1	750
Unit 2	750
R.P.M.:	
Unit 1	300
Unit 2	300
Minimum Load	
Unit 1	150 kW with 4 cfs
Unit 2	150 kW with 5 cfs
Maximum Hydraulic Capacity	92 cfs
Maximum Tail Water Surface	1,500 square feet
Minimum Tail Water Surface	1,500 square feet
Elevation Runner	1,428 feet
Tailrace Structure/Length	Rectangular flume 10 feet x 150 feet

Notes:
 ac-ft = acre-feet cfs = cubic feet per second MW = megawatts R.P.M. = rotations per minute