Kenai Hydro, LLC
3977 Lake Street
Homer, AK 99603

August 13, 2010

Secretary Kimberly D. Bose
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

- FILED ELECTRONICALLY -

RE: Revised Project Facilities and Operations Description for the Grant Lake Hydroelectric Project (Nos. 13212-001 and 13211-001) and Updated Filing Schedule

Dear Secretary Bose:

As summarized in its July 6, 2010 comments on FERC's Scoping Document 1 (SD1) for the Grant Lake Project, Kenai Hydro, LLC (KHL) has produced draft study plans and is in ongoing consultation with relevant agencies regarding several key issues raised during scoping meetings and review of study plans by the agencies and the public. Several of these issues directly impact the proposed Project facilities and associated study efforts. In order to fully consider and consult with agencies regarding potential Project effects and necessary study efforts, KHL has determined a revised Project development schedule is necessary.

Milestones in KHL's revised filing schedule are:

- Summer – Fall 2010: Consult with agencies re: Iditarod Trail and relevant study components
- Winter 2010 – Spring 2011: Consult with agencies and the public regarding revised study plans for 2011-2012 study program
- Summer 2011 –Fall 2012: Continue field studies
- May 2013 – File Draft License Application
- October 2013 – File Final License Application

KHL appreciates FERC's responsiveness to public and agency requests for early NEPA scoping, and looks forward to providing FERC with a license application in fall 2013.

As discussed with Mark Ivy on August 5, KHL is aware of the need to ensure that the final facilities proposal and potential impacts are adequately studied, and thus, has attached a revised Project facilities and operations description (Attachment 1) that will serve as KHL's basis to continue consultation with agencies and the public regarding appropriate study efforts. KHL expects that this Project description will continue to evolve as studies are implemented and feedback from agencies on key issues is received, primarily, the location of the Iditarod Commemorative Trail in the Project vicinity and determination of potential resource impacts and instream flow needs in the bypass reach and the tailrace.

Please feel free to contact me (msalzetti@homerelectric.com or 907-283-2375) with any questions regarding this filing.

Sincerely,

/s/ Mike Salzetti

Mike Salzetti
Generation Engineer
Kenai Hydro, LLC

cc: Service List and Mailing List for Project Nos. 13211 and 13212
Mark Ivy, FERC
Kim Nguyen, FERC
Kenai Hydro, LLC Project email contact list

Attachments
Attachment 1: Revised Project Facilities and Operations Description

Attachment 1
Grant Lake Project (FERC No. 13211/13212)
Revised Project Description

This section completely replaces Section 3 of the PAD filed with FERC August 6, 2009 and revisions filed on May 3, 2010.

3 PROJECT LOCATIONS, FACILITIES, AND OPERATIONS

3.1. Authorized Agent for the Applicant

The name, business address, and telephone number of each person authorized to act as agent for the Applicant is as follows:

Brad Zubeck
Project Engineer
Kenai Hydro, LLC
3977 Lake Street
Homer, Alaska 99603
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3.2. Project Location

The proposed Grant Lake Hydroelectric Project would be located near the community of Moose Pass, Alaska (pop. 206), approximately 25 miles north of Seward, Alaska (pop. 3,016), just east of the Seward Highway (State Route 9); this highway connects Anchorage (pop. 279,671) to Seward. The Alaska Railroad parallels the route of the Seward Highway, and is also adjacent to the Project area. The community of Cooper Landing (pop. 369) is located 24 miles to the northwest and is accessible via the Sterling Highway (State Route 1) which connects to the Seward Highway approximately 10 miles northwest of Moose Pass. The proposed Project location is in the mountainous terrain of the Kenai Mountain Range.

Land ownership and the proposed locations for Project facilities are shown in Figure 3.2-1.

3.3. Proposed Project Facilities

The proposed Project is comprised of a diversion dam at the outlet to Grant Lake (under consideration), an intake structure in Grant Lake, a tunnel, a surge tank, a penstock, a powerhouse, a tailrace detention pond, a switchyard with disconnect switch and step-up transformer, an overhead or underground transmission line, and a pole-mounted disconnect switch where the line intersects the existing City of Seward distribution line and access roads.

The powerhouse will contain two Francis turbine generating units with a combined rated capacity of 5.0 MW with a total design flow of 385 cfs.

3.3.1. Summary of Project Features

The proposed Project features have been developed based upon existing physical and environmental information and are conceptual in nature. As part of the pre-filing consultation process additional information will be obtained through technical and environmental studies, research, and consultation with equipment manufacturers and resource agencies. As new information becomes available, the design features presented below will continue to be refined and/or modified to accommodate any changed conditions, including maintenance of instream flow requirements or other resource management needs. A final proposal will be presented in the license application to FERC.

Project features as currently envisioned are summarized in Table 3.3-1 and are described in this section.

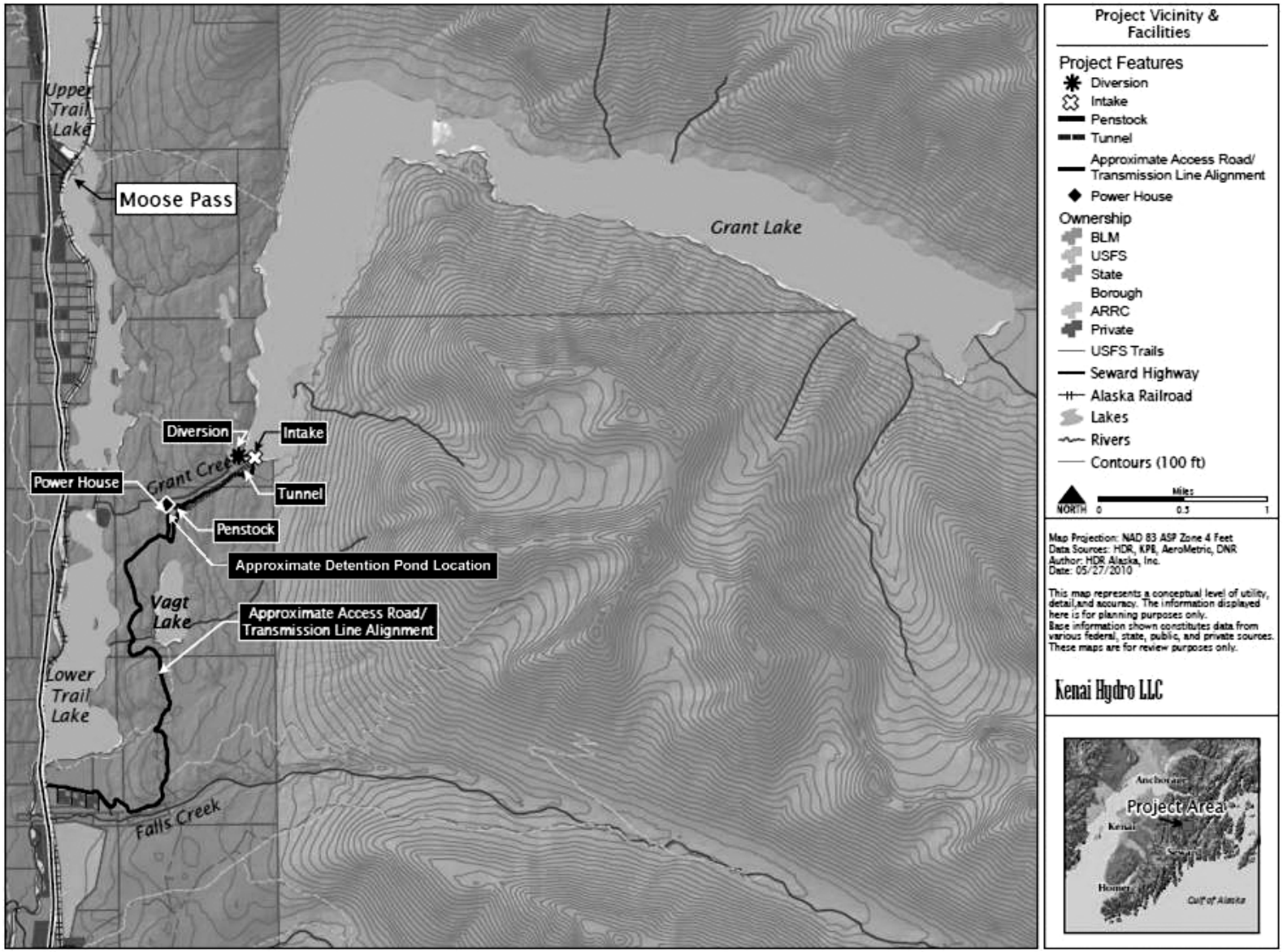

Figure 3.2-1. Proposed Project facilities, approximate access and transmission road location, and land ownership**.**

SUMMARY OF PROJECT FEATURES		
Number of Generating Units	2	
Turbine Type	Francis	
Rated Generator Output		
Unit 1	1.0 MW	
Unit 2	4.0 MW	
Maximum Rated Turbine Discharge		
Unit 1	75 cfs	
Unit 2	310 cfs	
Turbine Centerline Elevation	521.0	
Normal Tailwater Elevation		
Minimum	512.0	
Maximum	515.0	
Average Annual Energy	19,700 MWh	
Normal Maximum Reservoir Elevation	698.0 fmsl	
Normal Minimum Reservoir Elevation	687.0 fmsl	
Gross Head	183.0 feet	
Net Head at Maximum Rated Discharge	171.6 feet	
Grant Lake		
Drainage Area	44.0 sq. mi.	
Surface Area at Elevation 698.0 fmsl	1,790 acres	
Surface Area at Elevation 687.0 fmsl	1,700 acres	
Active Storage Volume	15,900 acre feet (Elevation 698.0 to 687.0)	
Average Annual Natural Outflow	139,650 acre feet	
Average Annual Natural Outflow	193 cfs	
Grant Creek Diversion		
Type (2 options under consideration)	**None (natural lake outlet)**	**Concrete Gravity Dam**
Maximum Height	Na	2 feet
Overall Width	Na	120 feet
Spillway Crest Length	Na	60 feet
Crest Elevation	698 fmsl	700 fmsl
Water Conveyance		
Intake	Tower	
Invert Elevation	655 fmsl	
Lower Pressure Pipeline		
Type	Welded Steel	
Length	200 feet	

SUMMARY OF PROJECT FEATURES	
Diameter	48 inches
Pressure Tunnel	
Type	10-foot Horseshoe
Length	3,200 feet
Velocity at Maximum Turbine Discharge	3.9 fps
Surge Tank	
Diameter	96 inches
Base Elevation (Preliminary)	650 fmsl
Top Elevation (Preliminary)	760 fmsl
Penstock	
Type	Welded Steel
Length	360 feet
Diameter	72 inches
Powerhouse	
Approximate Dimensions	45 feet x 60 feet x 30 feet high
Finished Floor Elevation	526 fmsl
Tailrace Detention Pond	
Approximate Acreage	5 acres
Approximate Capacity	15 Acre feet
Outlet Conveyance Length	300 feet
Tailrace	
Type	Open Channel
Length	200 feet
Transmission Line	
Type	Overhead or Underground
Length	Approximately 3.5 miles
Voltage	24.9kV
Access Roads	
Type	Single lane gravel surfacing with turnouts
Length	Approximately 4.0 miles; including 3.0 miles to the powerhouse and 1.0 mile to the intake (portions will be new road)

Table 3.3-1. Summary of proposed Project features.

3.3.1.1. Grant Creek Diversion

Two concepts are currently being evaluated for water control at the outlet of Grant Lake. In one option the natural lake outlet will provide control of flows out of Grant Lake. A new low level outlet will be constructed on the south side of the natural outlet to release any required environmental flows when the lake is drawdown below the natural outlet level. The outlet works will consist of a 48-inch diameter pipe extending back into Grant Lake, a gate house, regulating gate, controls and associated monitoring equipment. The outlet will discharge into Grant Creek immediately below the natural lake outlet.

In the second option, a concrete gravity diversion structure will be constructed near the outlet of Grant Lake. The gravity diversion structure would raise the pool level by a maximum height of approximately 2 feet, and the structure would have an overall width of approximately 120 feet. The center 60 feet of the structure would have an uncontrolled spillway section with a crest elevation at approximately 700 feet mean sea level (fmsl). Similar to the first option, a low level outlet will be constructed on the south side of the natural outlet to release any required environmental flows when the lake is drawn down below the natural outlet level. The outlet works will consist of a 48-inch diameter pipe extending back into Grant Lake, a gate house a regulating gate, controls, and associated monitoring equipment. The outlet will discharge into Grant Creek immediately below the diversion structure.

3.3.1.2. Grant Lake Intake

The water intake will be a concrete tower structure located approximately 500 feet east of the natural outlet of Grant Lake and adjacent to the shore. The intake structure will have base dimensions of approximately 15 feet by 15 feet. At the top of the intake will be a small house to contain the gate hoist mechanism and controls.

The intake will allow for drawdown of Grant Lake to elevation 687 fmsl thereby creating approximately 15,900 acre-feet of active storage for the project between elevations 698 fmsl and 687 fmsl. The intake can be designed to allow the Project to draw water near the surface at various levels of storage, if deemed necessary. The invert of the intake will be at elevation 655 to provide for adequate submergence to the tunnel. The front of the intake will be protected by a steel trashrack. Downstream of the trashrack will be a shut-off gate.

3.3.1.3. Tunnel

An approximately 3,200-foot-long, 10-foot diameter horseshoe tunnel will convey water from the intake to directly above the powerhouse at about elevation 623 fmsl. It is expected that the tunnel will be supported with rock bolts and shotcrete. It may be partially lined depending upon the geotechnical conditions encountered during excavation.

Near the end of the tunnel an 8-foot diameter surge shaft will be constructed. The surge shaft will extend to the ground surface at approximately elevation 750 fmsl. At the ground surface the shaft will transition to a steel pipe section. The pipe section will have a top elevation of 760 fmsl.

3.3.1.4. Penstock

At the outlet to the tunnel a short section of penstock will convey water to the powerhouse. The penstock will be constructed of welded steel and will be approximately 360-feet-long and will have an outside diameter of 72 inches. The penstock will bifurcate at the bottom immediately upstream of the powerhouse.

3.3.1.5. Tailrace

The tailrace will be an open channel approximately 200-feet-long and will convey water back to Grant Creek at approximately elevation 508 fmsl. The tailrace will be excavated from in-situ material and armored with riprap to prevent erosion. A control weir with an elevation of 512 fmsl will be constructed immediately downstream of the powerhouse at the beginning of the tailrace section.

3.3.1.6. Tailrace Detention Pond

An off-stream detention pond will be created to provide a storage reservoir for flows generated during the rare instance when the units being used for emergency spinning reserve are needed to provide full load as described in Section 3.4.1. In this situation, the additional powerhouse flows would be diverted into the detention pond and then released slowly back into Grant Creek. The detention pond would be located immediately south of the powerhouse and would have a capacity of approximately 15 acre feet and a surface area of approximately 5 acres. Water would be conveyed back to Grant Creek through a pipeline.

3.3.1.7. Powerhouse

The powerhouse will be located on the south bank of Grant Creek near the end of the canyon section of the creek. The powerhouse will be approximately 45 feet by 60 feet by 30 feet high and will have a finished floor elevation of 526 fmsl. The powerhouse will be a pre-engineered metal building on a concrete foundation.

The powerhouse will contain two horizontal Francis type turbine/ generator units with a rated total capacity of 5,000 kW, guard valves, and associated switchgear and controls. Unit 1 will have a design flow of 75 cfs and a rated capacity of 1,000 kW. Unit 2 will have a design flow of 310 cfs and a rated capacity of 4,000 kW. The size of each unit will be optimized once all flow conditions are known. Centerline of the turbine and generator units will be approximately 521 fmsl. The turbines could operate over a range of flows from the maximum of 385 cfs to a minimum of around 22 cfs depending on conditions. The tailwater elevation at the powerhouse will range from approximately elevation 512 to 515 depending upon the output level. The powerhouse will also contain a bypass valve to release flows during power generation outages.

3.3.1.8. Transmission Line/Switchyard

Both underground and overhead transmission lines to deliver energy from the Project to the grid are being evaluated. In addition to any overhead transmission structures, the facilities will include a switchyard at the powerhouse consisting of a pad-mounted disconnect switch and a pad-mounted step-up transformer. The transmission line will run from the powerhouse parallel to the access road where it will intersect the City of Seward distribution line. The interconnection will have a pole mounted disconnect switch.

If utilized, the poles would be designed as tangent line structures on about 250 foot centers. Design of the line will also incorporate the latest raptor protection guidelines. Collision avoidance devices will be installed on the line at appropriate locations to protect migratory birds.

3.3.1.9. Access Roads

The Grant Lake Project will require an access road to both the powerhouse located near the base of the Grant Creek canyon and to the intake at Grant Lake. This access road will be primarily used during project construction but afterwards, the powerhouse will be visited approximately once a week and the intake visited approximately once a month beginning just after the ice melts and continuing until just before freeze up. The powerhouse access road will be maintained year around. The intake access road will not be maintained in winter.

The road to the powerhouse is approximately three miles long beginning at the south end of Lower Trail Lake and crossing the Alaska Railroad tracks at an existing crossing located at approximately MP 25.2 of the Seward Highway. The first mile of this road will follow the existing Falls Creek mining road. At a point approximately one mile up the Falls Creek road the access road will continue northward to the powerhouse staying between Lower Trail Lake and Vagt Lake. As currently proposed, portions of the road come near, or intersect with the commemorative Iditarod National Historic Trail that will be under construction soon. The location of the road or the trail may be adjusted to avoid or mitigate potential impacts of the access road on the trail.

The intake access road is approximately one mile long, beginning at the powerhouse. The road will ascend a 230-foot bluff to get to the top of the southern lip of the Grant Creek canyon. The road then generally follows the southern edge of the Grant Creek canyon until it descends to Grant Lake.

The road will be gravel with a 14 foot top width. Maximum grade will be 16 percent. Periodic turnouts will be provided to allow construction traffic to pass. Fifty-foot radius curves will be used to more closely contour around the small steep hills of bedrock to limit the extent of the excavation and the height of the embankments.

3.3.2. Proposed Project Boundary

The proposed Project Boundary will encompass each of the Project features described above, and the area around Grant Lake up to approximately contour elevation 700 fmsl. The corridors for the access roads/transmission line and penstock will be approximately 50-75 feet from each side of the centerline. The specific delineation of the proposed Project Boundary, in terms of survey coordinates, will be made after study work has been completed and will be included as part of the license application.

3.3.3. Proposed Construction and Development Schedule

The Project will be constructed over a 30-36 month timeframe after the issuance of the Project license. Construction will begin in the April timeframe with the construction of access roads. Construction of the Grant Lake diversion structure (if necessary) and intake will be performed by first drawing down the lake elevation using a pair of diversion trenches cut through the outlet of the lake. This method will allow the lake to be drawn down to approximately elevation 680 fmsl over the winter, if necessary. Next the intake will be constructed behind an in-situ rock cofferdam. Once the intake and tunnel are complete the in-situ cofferdam will be removed by blasting. The Grant Lake diversion structure, if needed, will be constructed at the same time. The precise construction schedule and methods will be described further in the license application.

3.4. Project Operations

3.4.1. Proposed Project Operations

The Project will operate in block loading and level control (run-of-river) modes. The primary operational mode will be block loading at a specific output level. Level control, or balancing of outflow to inflow, will likely only occur during periods of low natural inflow to Grant Lake when the reservoir is at or near minimum pool elevation. Due to the small size of the Project in relation to the size of the interconnected system, the Project is not likely to be used to load follow. Additionally, the units will be utilized to fulfill a portion of Homer Electric Company's spinning reserve capacity requirement. Spinning reserve is energy capacity that is immediately available to assist Alaskan Railbelt utilities in the event of emergency conditions. Use of full emergency spin capacity is a rare event but when required, the units would be called upon to provide full load at maximum ramp rates for 15 minutes. This should provide sufficient time for non-spinning reserve to come on-line. The water from this event would be diverted to a detention pond (as described earlier) and slowly released at a controlled rate back into the stream.

With Grant Lake operating as a regulating reservoir, the typical mode of operation will be to capture high spring and summer runoff and to enter the late fall and winter season with the reservoir full at elevation 698 fmsl (without an impoundment structure) or 700 fmsl (with an impoundment structure as described in 3.3.1.1). During the winter months when the energy is needed most on the system, the reservoir will be systematically drafted to produce energy throughout the winter. The rate at which water is drawn from storage will generally be equal to the required environmental flow requirement downstream of the powerhouse. Occasionally, the Project may run at higher capacities to meet system needs at intermittent times. However, the amount of time the Project could operate at higher outputs would be limited by available storage. This process will continue until the reservoir begins to refill with snowmelt (typically around

May). During the summer months when inflow exceeds powerhouse capacity, the Project will most often run continuously at peak capacity.

Expected average annual reservoir fluctuations are shown in Figure 3.4-1. Due to the amount of storage, there will be negligible carryover storage from one year to the next. The maximum lake level drawdown could be below the average drawdown to as low as 687 fmsl, but actual drawdown will be dependent on water inflow and operational scenarios.

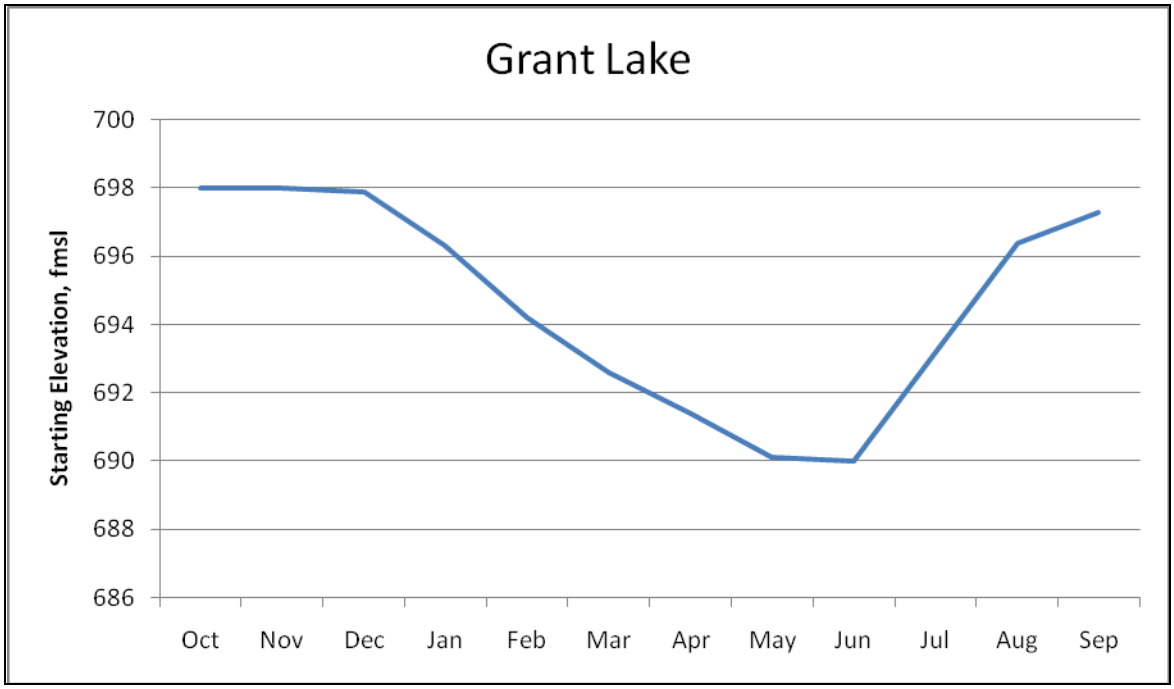

Figure 3.4-1. Estimated average Grant Lake elevations with proposed Project operations.

Flows in Grant Creek are naturally high during the summer when snowmelt is occurring and low in the winter when temperatures are below freezing. With the proposed Project in operation, the high flows in the summer will be stored and released later in the season. Figure 3.4-2 shows the effect of this operation.

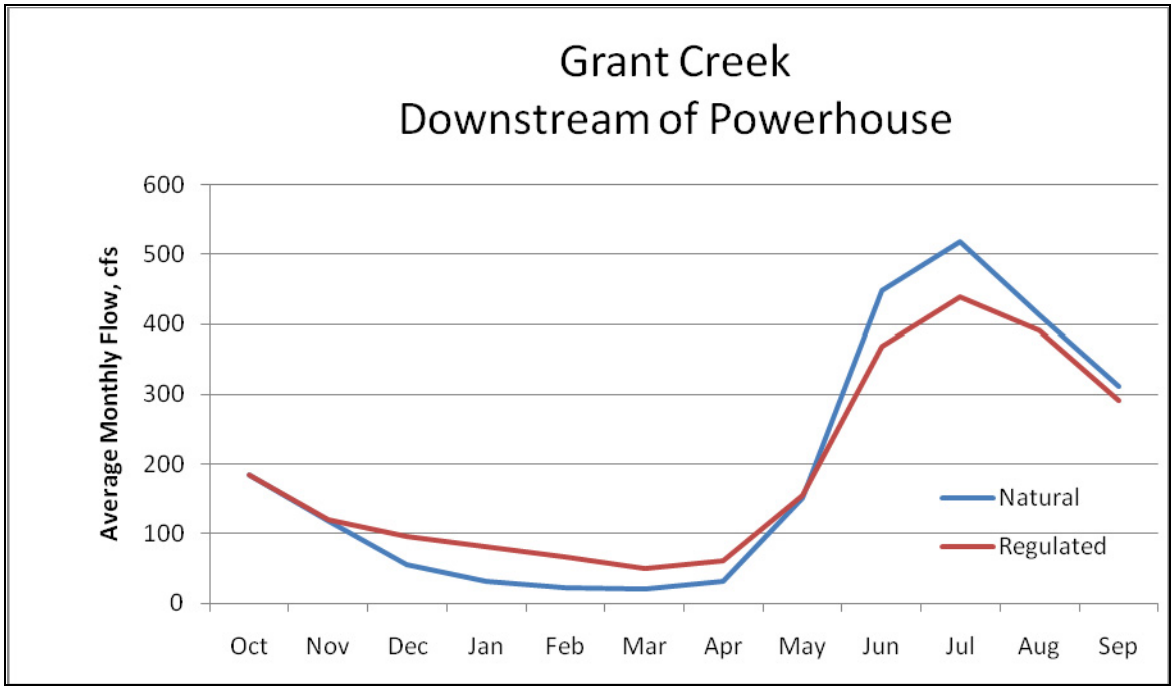

Figure 3.4-2. Estimated average monthly flows in Grant Creek downstream of the proposed powerhouse location.

Flows in Grant Creek downstream of the tailrace will be a combination of turbine discharges, natural inflow, and flows released into the creek at the lake outlet. Generally, the flows in the reach of Grant Creek below the lake outlet will be reduced to the environmental flow requirement, which has not yet been determined. Flows in this reach between the lake outlet and the powerhouse will increase when spill is occurring at the lake outlet.

3.4.2. Project Capacity and Production

The Project will have an installed capacity of 5,000 kW. Estimated energy production was simulated using a computer model utilizing daily flows, reservoir characteristics, and assumed equipment data. The predicted average annual energy from the Project with a maximum lake elevation of 698 fmsl is 19,700 MWh representing a plant factor of 45%. Predicted average annual energy with a maximum lake elevation of 700 fmsl is 20,500 MWh. Monthly generation is assumed to vary as shown in Figure 3.4-3. Estimates will be revised once instream flow studies are completed, and any flow requirements for the reach between the Grant Lake outlet and the powerhouse are determined.

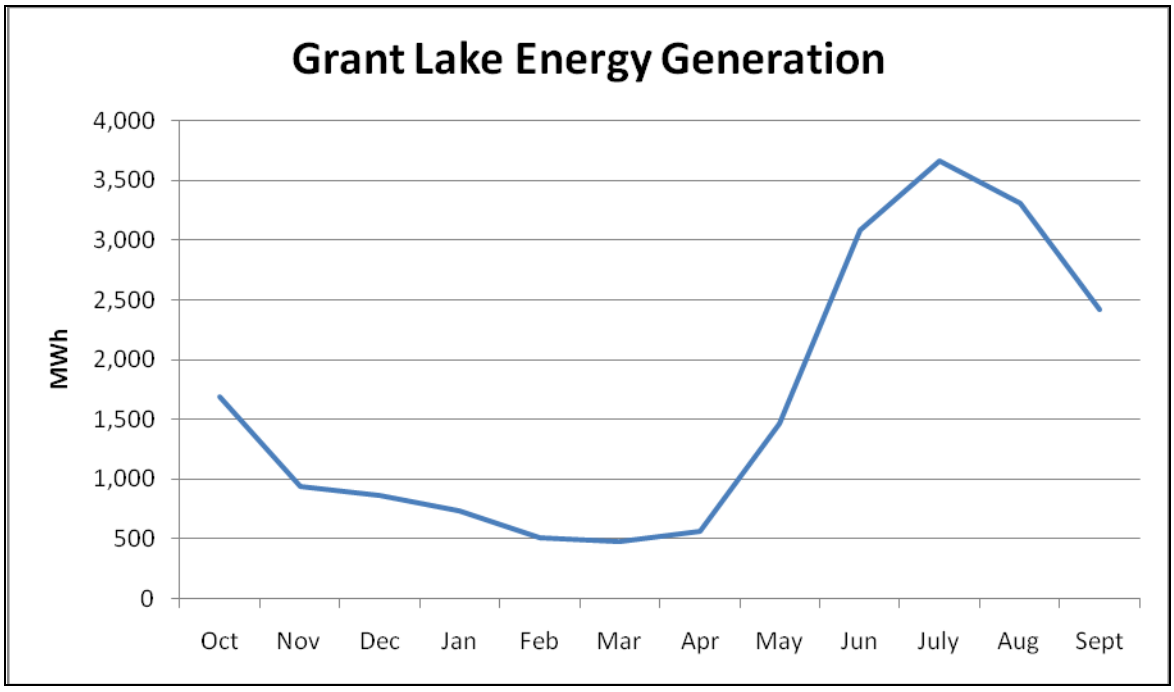

Figure 3.4-3. Grant Lake estimated average monthly generation.

3.4.3. Summary of Project Generation

The proposed Project is a new facility. As such there is not a record of generation.