

BLACK BEAR LAKE HYDROELECTRIC PROJECT

NO. 10440

ATTACHMENT 'C'

A. Flows

This project operates under a license article that requires minimum instream flows that vary by month. The flows are specifically meant to maintain the salmonid habitat below the Project tailrace. Enclosed are pages excerpted from the 1992 Environmental Assessment (EA) conducted by the Federal Energy Regulatory Commission (FERC). In the EA, FERC notes on page 21 that no agency filed comments on the minimum flow proposal, but that in 1989 and again in 1990 the National Marine Fisheries Service (NMFS) stated that if the flows were the same as those proposed for the 1982 project (which was the State of Alaska's proposal for developing a hydroelectric project here), then they were still in agreement. The flows, as proposed by AP&T, are similar but not identical to those from the 1982 proposed project, but NMFS did not comment.

It should be noted that over the last three years, 2003-2005, there has been a drought on Prince of Wales Island, limiting the winter snowpack and reducing the summer precipitation. The agencies have been willing to allow us to operate the project for 1-2 months below the minimum instream flow during the summer in order to keep the lake charged enough so that some water is still available for late summer and fall salmonid runs. The Tenants Method is used to determine at what flow we can reasonably operate the Project without significantly impacted salmonid habitat. In 2005, we began using diesel to supplement the hydro (so that hydro could go to just meeting the minimum instream flow in hopes of also recharging the lake) in early June and were able to meet the minimum instream flow requirement for all months but August. At the end of August we were able to return to the required minimum instream flow. In 2004, we had to drop below the minimum instream flow for the first three weeks of September due to low precipitation, and in 2003 we had to drop below the minimum instream flow for the month of August. Summaries of these drought summers are enclosed.

These low flow occurrences were the result of having less water coming into the system than was required to meet the minimum instream flow requirement. However, historically, rains would occur throughout the summer in sufficient quantities to maintain the lake above -10 feet during the summer and even spilling out the natural outlet during June and July. For this reason we continued to operate the Project fairly normally in 2003 and 2004, considering these low precipitation years as true anomalies. However, when it became evident that 2005 may also have similar weather patterns, we began using diesel generation in early June, well before the previous two years crisis point, but still had to go below the minimum instream flow requirement at some point. This year is looking to be similar.

Despite this, we have agreement from the agencies that we should operate as we have been as we keep them informed and involve them in some decision making as we go through the drought. They would rather that we just do what we want, but because of the license and permits, they bare some of the burden of determining how best to meet the needs of the habitat below the Project. See the enclosed summaries from the last three years and see communications to and from the agencies. FERC has not considered these

occurrences to be violations of our license and understand that this is mainly out of our control. The danger to us has always been that if we supplement too early and rains return to normal, the lake which can fill quickly could end up spilling and we lose water that is cheaper to operate with than diesel, the cost of which then gets passed onto the customer. There is no grid of hydro projects from different locations to tap into as there is in the Lower 48, so expensive diesel fuel must be relied upon to meet the needs of the local communities and industrial centers.

We do not believe that we are out of compliance with our permits or license in such a way as to make this Project unacceptable for certification as a low impact hydroelectric project because we are dealing with acts of nature and work with and have agreement from the resource agencies on what best to do. We believe we are operating as responsibly as possible under these circumstances.

BLACK BEAR LAKE HYDRO

EXCERPT FROM FINAL ENVIRONMENTAL
ASSESSMENT CONDUCTED BY FERC

ENVIRONMENTAL ASSESSMENT

FEDERAL ENERGY REGULATORY COMMISSION OFFICE OF HYDROPOWER LICENSING DIVISION OF PROJECT REVIEW

Black Bear Lake Hydroelectric Project
FERC No. 10440-001-Alaska
June 25, 1992

I. APPLICATION

On May 24, 1991, Alaska Power and Telephone Company (AP&T) filed an application for major license, less than 5 megawatts (MW), for the Black Bear Lake Hydroelectric Project. The 4.8 MW project would be located on Black Bear Lake and Black Bear Creek, on private lands and 171.5 acres of U.S. Forest Service (FS) lands within the Tongass National Forest near the community of Klawock on Prince of Wales Island, Alaska (figure 1).

II. PURPOSE AND NEED FOR ACTION

A. Purpose

AP&T proposes to build the Black Bear Lake Project, which would provide about 23.1 gigawatthours of electrical energy a year. The project would use the natural flows into Black Bear Lake while using the upper 15 feet of the lake for storage to meet peak energy demands. AP&T would use the energy to meet system needs.

B. Need For Power

The applicant, Alaska Power and Telephone Company (AP&T), is an electric utility serving power needs on Prince of Wales Island (island). AP&T proposes to build and operate the Black Bear Lake Hydroelectric Project to (1) displace existing diesel generation and (2) ~~meet~~ future load growth in the cities of Craig and Klawock.

The island has five small load centers: the cities of Klawock, Craig, Hydaburg, Hollis, and Thorne Bay. Three of these loads are completely isolated and two, Craig and Klawock, are interconnected; so the island has four isolated systems. AP&T owns, operates, or maintains electric generation and distribution facilities in all the towns except Thorne Bay.

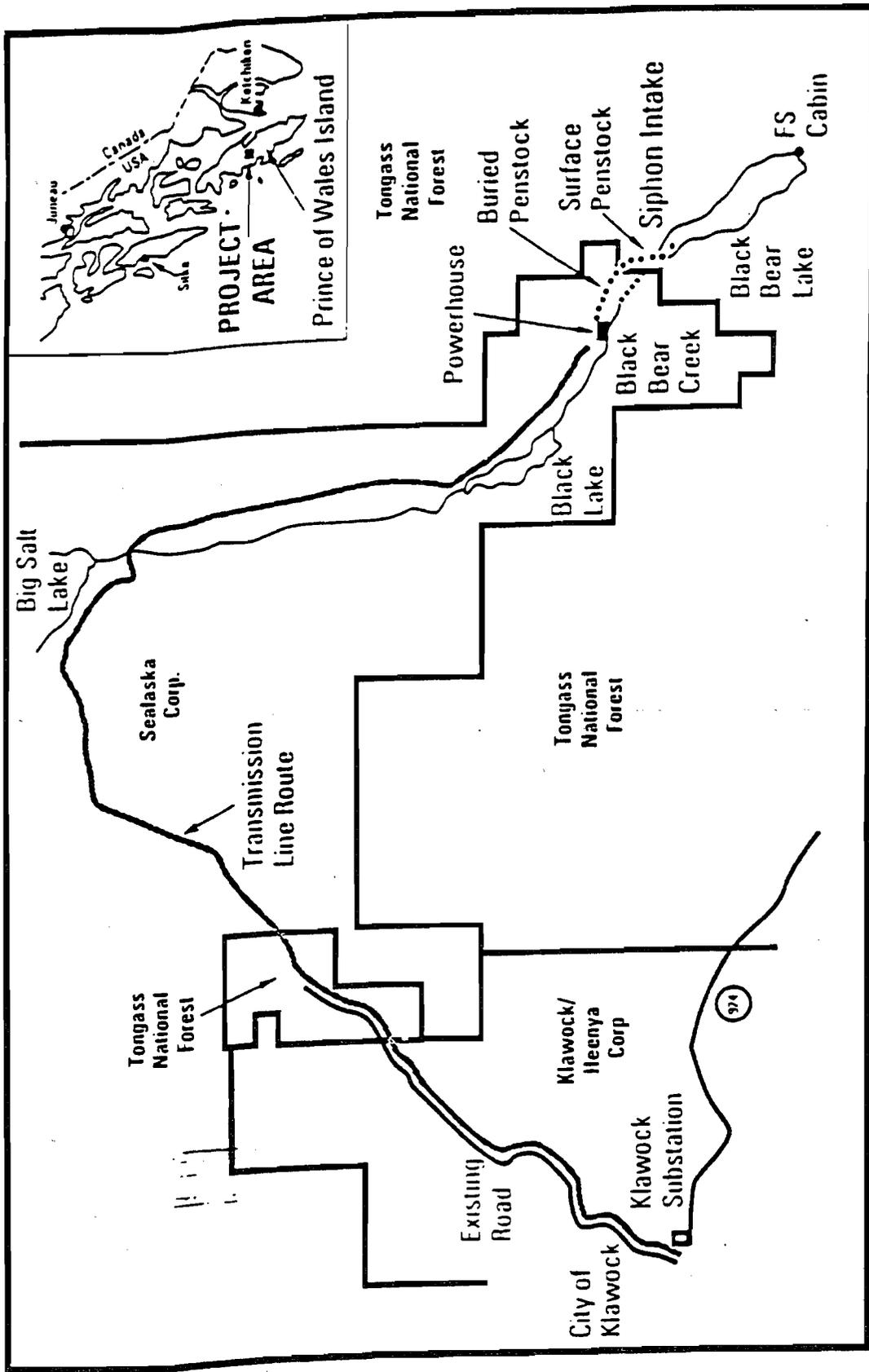


Figure 1. Location of the proposed Black Bear Lake Project (FERC Project No. 10440), Alaska.

be masked by the natural variability in the system, as well as the moderating effects of the aquifer and the diffusive effect of tributary flows.

Sedimentation

Construction of the project facilities would cause short-term adverse impacts to the water quality of the project area. Temporary increases in sediment load and nutrient concentration would result from the erosion of disturbed land surfaces associated with construction. Due to the bedrock substrate and depth of Black Bear Lake, we expect sediment impacts would be minimal. Minor, short-term, adverse impacts due to increased sediment load from construction of the powerhouse and tailrace could affect the upper reaches of Black Bear Creek. Suspended sediment fines could settle out in the less steep, lower portions of Black Bear Creek, potentially silting in gravel habitat of anadromous fish.

AP&T proposes a comprehensive plan to prevent and reduce sediment impacts from construction activities. These measures include using sediment barriers, sediment ponds, and revegetation of exposed areas.

We recommend approval of AP&T's erosion and sediment control plan in the Geology section. If properly implemented, this plan would ensure that construction impacts to the water quality of the project area would be short term and negligible .

Unavoidable Adverse Impacts: Project construction would result in a minor adverse impact due to increased sediment load to Black Bear Creek.

3. Fishery Resources

Affected Environment: Black Bear Lake supports a self-sustaining population of rainbow trout introduced into the lake in 1956 by the ADFG. No other species of fish are known to inhabit the lake. Sampling studies estimate a population of between 500 to 800 adult fish. Spawning typically occurs in the spring (May to July) in the inlet and outlet streams of the lake. Due to the limited availability of substrate and stream habitat around the lake, beach spawning occurs in areas where run-off enters the lake.

Black Bear Creek, and the two waterways below it, Black Lake and Black Creek, support spawning runs of pink salmon, chum salmon, coho salmon, and sockeye salmon (listed in descending order of escapement returns). The peak escapement period for pink salmon ranges from mid-August to late September; for chum salmon, from late August to late September; for coho salmon, from

late August to early November; and for sockeye salmon, from early July to early September.

For the period 1960 to 1981, pink salmon escapement averaged 14,218 per year, with a peak year return of 62,000. Chum salmon runs have been recorded up to 10,000, coho up to 6,500, and sockeye up to 700.

In Black Bear Creek, the chief spawning areas are in the South Tributary and upstream of the confluence of the West Fork of the South Tributary. Black Bear Creek also has excellent coho salmon rearing habitat. The principal coho salmon rearing areas are the beaver ponds and the slow moving reach of the creek below the confluence of the West Fork of the South Tributary.

Peak out-migration of pink salmon fry is often related to high discharge and to ice leaving the lower lakes during mid-April and May. The peak out-migration of coho and sockeye fry from Black Bear Creek typically occurs from early April to mid-May. An estimated 440,000 to 460,000 pink salmon fry migrated from spawning habitat in Black Bear Creek in 1982, with an additional 16,258 sockeye fry and 7,606 coho fry.

In addition, Black Lake and Black Creek support populations of cutthroat trout, rainbow trout, steelhead trout, and Dolly Varden.

Environmental Impacts and Recommendations:

Minimum Flows Released to Black Bear Creek

By using the upper 15 feet of Black Bear Lake for storage, the project would alter the natural flow regime in the upper 1-mile of the 1.7-mile-long Black Bear Creek. Water that would typically spill from the lake outlet over the falls and into the aquifer would be stored and released during high-demand periods. Altering the flow regime downstream of the project could affect fisheries habitat in Black Bear Creek, potentially decreasing or dewatering portions of Black Bear Creek during periods of reduced flows (i.e., such as when the project is releasing flows that differ from natural flows).

AP&T proposes to release minimum flows to Black Bear Creek below the powerhouse based on existing seasonal patterns (table 2). The flow would be provided using a flow bypass in the penstock. No minimum flow would be provided to the proposed bypass reach beyond spill that would occasionally occur from the lake outlet. Minimum flows below the project would be provided during times of storage. AP&T says that this flow regime would have beneficial impacts because it would provide supplemental flows during low-flow winter periods when natural flows typically are lower than 9 cfs. Minimum flows would, at times, be higher

than pre-project conditions during the months of July to September. AP&T says that these flows may increase spawning success of salmon in Black Bear Creek.

Table 2. Minimum instream flow schedule for Black Bear Lake Project as proposed by AP&T (Source: Alaska Power and Telephone Co. 1991, as modified by staff).

Month	Existing Mean Monthly Flow (cubic feet per second)	Proposed Minimum Flow (cubic feet per second)	Percent Reduction of Mean Monthly Flow	Existing Percent Exceedence ¹
January	30	9	70	75
February	19	12	37	50
March	15	9	40	57
April	18	15	17	50
May	37	22	41	85
June	40	15	62	99
July	26	19	27	58
August	22	17	23	46
September	31	24	23	40
October	43	20	53	75
November	34	15	56	65
December	22	9	59	65

¹ The percent of the time the existing flows spilled at the lake outlet of Black Bear Lake are greater than AP&T's proposed minimum flows.

No agency filed comments on the minimum flow proposal for this project. The National Marine Fisheries Service (NMFS) sent a letter of concurrence to AP&T in 1989 and again in 1990, stating that if the flows were the same as those proposed for the 1982 project, then they were still in agreement. The flows, as proposed, are similar but not identical to those from the 1982 proposed project (Federal Energy Regulatory Commission 1983), but NMFS has not commented.

Under project conditions, monthly flows would exceed 9 cfs 100 percent of the time, while under natural conditions, flows of 9 cfs are only equaled or exceeded 100 percent of the time in May and June. Since all project flows subsequently pass through the aquifer and become available to the lower reaches of Black Bear Creek, minimum flows below the powerhouse would occur only when the project was not operating and was storing water.

Significant tributary flows below the proposed powerhouse site and above the coho salmon rearing habitat augment Black Bear Lake flows. Flow data for Spring Fork, which is fed primarily from upwelling, would add from 5 to 25 cfs in additional flow to Black Bear Creek throughout the year. Additionally, the moderating effect of the aquifer on flows, as discussed in the water resources section, would reduce the magnitude of short-term flow fluctuations on downstream aquatic habitat.

Streamflow and dye study data suggests that during low-flow summer periods up to 80 percent of the flow to Black Bear Creek now comes from sources that would be unaffected by the project. Adding to low summertime flows would provide more near-shore habitat for rearing coho salmon. The additional requirement by FS that AP&T not drawdown the lake from June 1 to September 15 would likely cause more spill to be released over the falls at the lake outlet after the maximum of 45 cfs (the maximum capacity of the 2 Pelton turbines) was used for generation.

Natural low winter flows in Black Bear Creek typically dewater portions of the streambed. Flow duration data shows that project operations, when the project reaches capacity, would reduce existing flows by 37 to 70 percent. During the early phase of project operation, minimum flows would exceed 15 cfs at all times.

We conclude that AP&T's proposed minimum flow schedule is adequate to protect and enhance aquatic habitat in Black Bear Creek. Any operational effects that could potentially adversely affect the aquatic habitat would be reduced by (1) the fact that the project would not operate at full capacity until well into the future; (2) the moderating effects of the aquifer; and (3) the additional tributaries that add flow to the upper reaches of Black Bear Creek.

Lake Level Fluctuation

Seasonal and daily fluctuation of water levels in Black Bear Lake could adversely impact resident trout spawning habitat and egg survival. Reductions in lake levels between June and August, as proposed by AP&T, could expose and desiccate rainbow trout eggs deposited in shallow water.

The diversion of flows from Black Bear Lake through the proposed penstock would remove resident trout from the lake and pass them through the proposed horizontal shaft Pelton turbine. High mortality (>70 percent) of fish has been noted during entrainment and passage through similar Pelton turbine designs (Gloss et al. 1982).

AP&T would construct the siphon intake manifold to have five 48-inch-diameter intake openings, each with steel wedge-wire cylindrical screens. The maximum approach velocity at each opening would be approximately 0.5 feet per second. These velocities are within limits that adult rainbow trout can tolerate, and trout fry are unlikely to be at depths within Black Bear Lake where they would be vulnerable to entrainment and/or impingement.

Mortality of trout from turbine passage with the proposed intake screens should be negligible. To ensure that project operation has minimal impact on the resident trout in Black Bear Lake, AP&T should construct the intake screens as proposed in their license application.

Fishery Habitat in Black Bear Creek

Damming activity by beaver populations has created pool habitat in the upper reaches of Black Bear Creek, which serves as excellent rearing habitat for coho salmon fry. These still-water areas in the upper reaches of Black Bear Creek, below the proposed powerhouse location, provide the best habitat in the Black Bear Creek drainage. Increased access to the project area could impact local beaver populations (see Wildlife section).

In the Wildlife section, we discuss AP&T's proposal to monitor beaver populations in the project vicinity. Minimizing impacts of the proposed project on beaver populations is essential to preventing impacts to coho salmon rearing habitat. Implementation of the monitoring plan recommended in the Wildlife section would adequately protect the fishery resource.

The proposed project would bypass the 1,400 foot waterfall and approximately 600 feet of Black Bear Creek. The loss of fishery habitat from diverting flows would be negligible since these areas are primarily inaccessible to anadromous fish. Surface flows in the upper reaches of Black Bear Creek only exist during periods of high run-off and thus the area is seldom used by fish. The natural steepness (1,400 feet of vertical drop in 3,200 feet of stream run) precludes fish from inhabiting or passing this area. Therefore, we conclude that the project, as proposed, would not cause any direct loss of fishery habitat in Black Bear Creek.

BLACK BEAR LAKE HYDROELECTRIC PROJECT

NO. 10440

SUMMARIES OF SUMMER DROUGHT OPERATIONS

~2003-2005~



A subsidiary of Alaska Power & Telephone Company.



September 19, 2005

Magalie R. Salas
Office of the Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: Black Bear Lake Hydroelectric Project
Project No. 10440
Article 405

Dear Ms. Secretary:

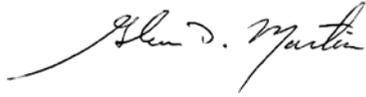
This e-filing is to request a retraction or cancellation of the previously filed request for temporary waiver of the minimum instream flow requirement, pursuant to license Article 405 for the Black Bear Lake Hydro Project (BBLH), No. 10440. On August 23, 2005, BBLH filed a request for this waiver. On September 12, 2005, the Commission issued a public notice requesting comments.

On August 30, 2005, BBLH returned to meeting the minimum instream flow requirement 24 hours per day. BBLH first went below the August minimum instream flow requirement (17 cfs) on August 8, 2005, due to drought conditions on Prince of Wales Island. The enclosed chart labeled "BBL August 2005 High-Lows of Flow" shows during the evening/early morning hours flows would go as low as about 11 cfs, but during the day would go above the minimum instream flow requirement. On weekends, because of low electricity demand, only hydropower was used, noted by the spikes in use and actually operating above the minimum instream flow requirement the whole weekend.

As mentioned in the August 23 filing, the agencies had wanted BBLH to go below the minimum instream flow requirement as early as June. The main agency concern was that BBLH be able to operate at or above the minimum instream flow by September for the salmonid runs that primarily occur at that time. BBLH was able to achieve this, having supplemented hydroelectric power with diesel generation since June 6, and then going below the minimum instream flow requirement on August 8 until August 30. The lake has continued to fill as precipitation has returned to relatively normal patterns, however, BBLH has held off in requesting this cancellation until more certain of the lakes recharge.

In summary, at this time the lake has recharged sufficiently, the weather pattern is more normal, and the project is operating at or above the minimum instream flow. Therefore, a temporary waiver of the minimum instream flow requirement is no longer needed.

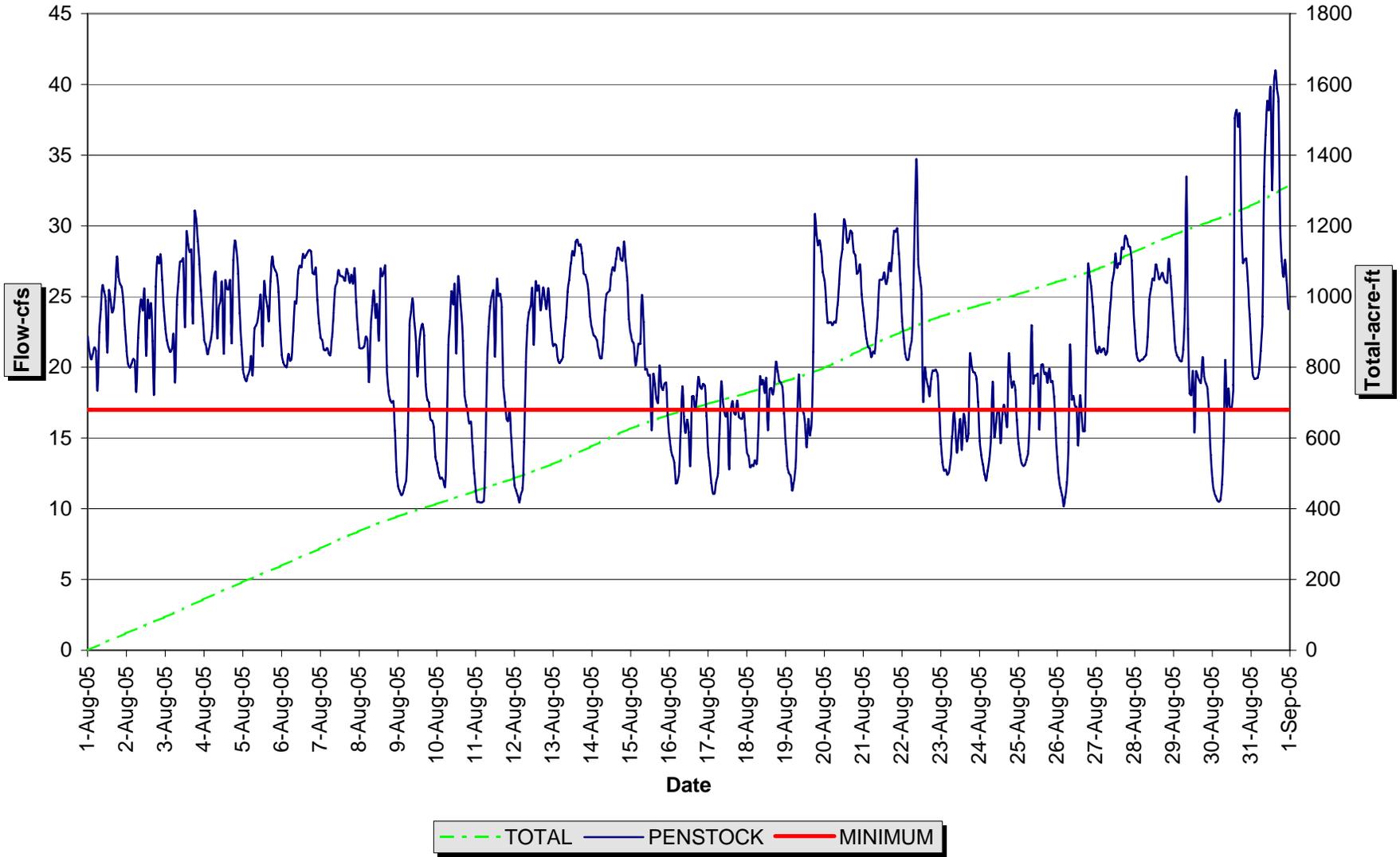
Respectfully Submitted,



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Cc: Susan Walker, NMFS
Sheila Martin, DNR-OHM&P
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Kevin Brownlee, ADF&G
John Dunker, DNR
Angela Gatto, USFS
Ed Grossman, USF&WS
Bob Grimm, Pres – BBL Hydro
Vern Neitzer, Senior Engineer
Bob Berreth, Electrical Engineer

Black Bear Lake Penstock Flow-August 2005





A subsidiary of Alaska Power & Telephone Company.



August 23, 2005

Magalie R. Salas
Office of the Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: Black Bear Lake Hydroelectric Project
Project No. 10440
Article 405

Dear Ms. Secretary:

This is an e-filing with the Commission to request a temporary waiver of license requirements for instream flow. Pursuant to License Article 405 for the Black Bear Lake Hydro Project, No. 10440, we are required to maintain minimum instream flows in Black Bear Creek. The minimum instream flows vary from month to month and for August are 17 cfs. However, this year Southeast Alaska has been experiencing a drought. Below are weekly e-mail communications with the resource agencies since May this year regarding lake levels for this project.

Black Bear Lake Hydro – May 19, 2005
Message to Resource Agencies

Dear Agency Representatives,
Back on December 7, 2004, we agreed to have a meeting in June to discuss conditions at Black Bear Lake. The meeting is intended to assess lake level, last winter snowpack, and precipitation that has and will occur and determine if flow or operational modifications will be necessary during the summer. Also, last year we did not have an annual hydro meeting, and if interested, we could have this meeting following discussions about Black Bear Lake Hydro.

I am considering having the meeting the last two weeks of June, depending on your schedules. If you would please check your calendars for the weeks of June 20 and 27 and let me know what dates during those two weeks you would or wouldn't be available, I will coordinate an agreeable date. The meeting would probably start at 9 a.m. Alaska time and with the addition of the hydro meeting, could take most of your morning. I may wish to hold the meeting in Juneau for those that can attend and others could participate via telephone.

Black Bear Lake Hydro – June 6, 2005
Memo to Resource Agencies

Dear Agency Representatives,

Sorry for the delay in providing a decision on how we will operate in June to reduce the drawdown of Black Bear Lake. Before I forget, thank you for participating in last weeks teleconference. Starting today, we plan on supplementing the hydro with diesel generation by operating diesel between 7 a.m. and 5 p.m. during the week. Because loads are lower on weekends and evenings, staying with 100% hydro at those times will allow us to just meet the minimum instream flow requirement and not waste the water. If we operated any diesel at night or on weekends, we would be bypassing water for the instream flow requirement without using it to generate power, so it might as well be used.

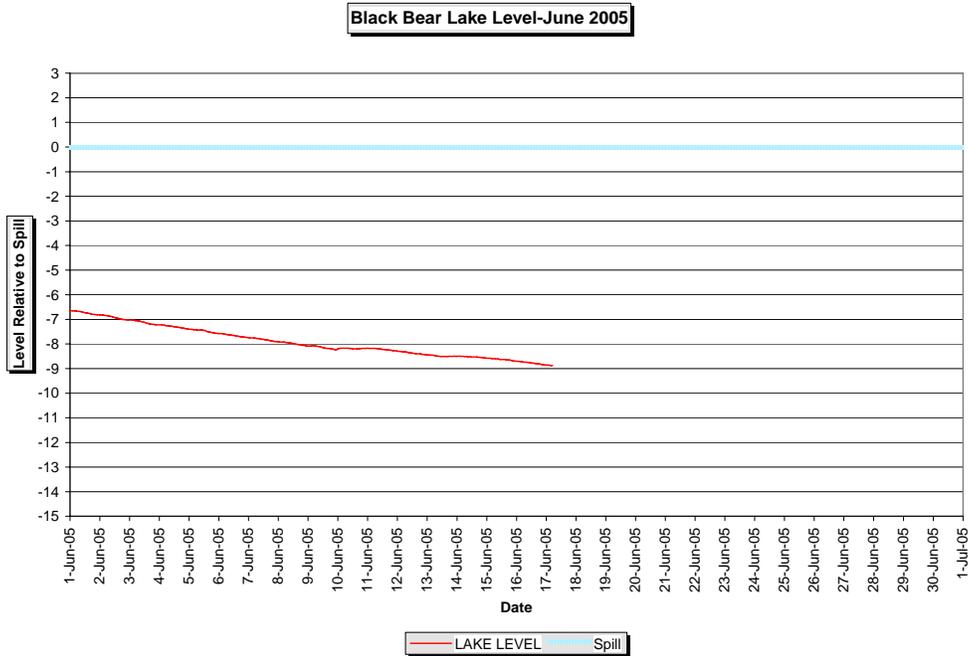
We would prefer to operate this way for the month of June and not to go out of compliance with our license requirement. We are way ahead of last year as far as implementing the use of supplemental diesel, and hope this will mitigate the low precipitation and allow us to meet the minimum instream flow later this summer. We will update you via e-mail either during the later part of the week of June 13, or the early part of the week of June 20. For the follow-up teleconference, because of the July 4th holiday weekend, we could convene a teleconference on either Thursday, June 30 or Tuesday, July 5 to update you on how things are going and reassess the situation. Please let me know if you have a preference; otherwise I will choose a date.

Black Bear Lake Hydro – June 17, 2005
Memo to Resource Agencies

Dear Agency Representatives,

Attached are two graphs showing lake level and flow for Black Bear Lake Hydro. The lake level has dropped about 1.2 feet since we began supplementing with diesel on June 6. On June 10, Klawock recorded 0.19-inches of rain, and the lake drawdown flattened out for 2 days, but there has only been 0.55-inches of rain recorded at Klawock for June.

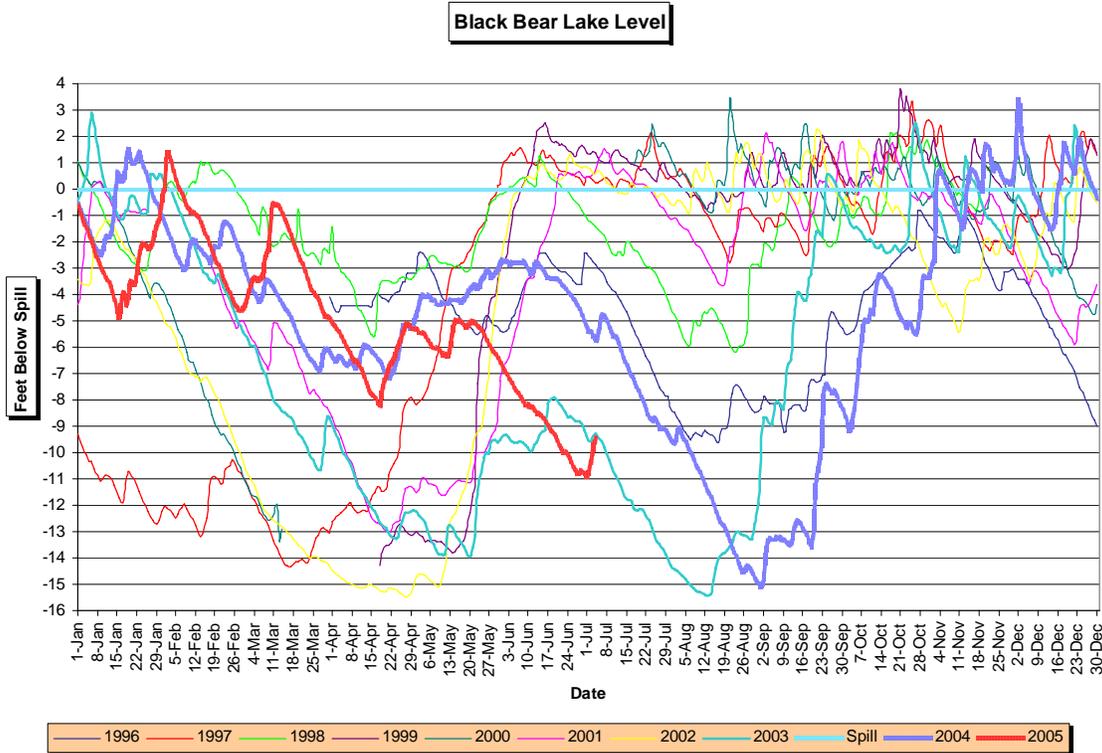
We have been operating two diesel plants during this period. Diesel is meeting up to 50% of the load during the day, while still meeting the minimum instream flow requirement with hydro. We will hold a teleconference at 9 a.m. Alaska time on July 5 to provide another update and discussion. The dial-in number is 907-365-0221.



**Black Bear Lake Hydro – July 5, 2005
Memo to Resource Agencies**

Dear Agency Representatives,
Attached is a file showing the present lake level. There has been rain for about a week now on POW and the lake has risen to about 9.5 feet. We plan to continue our present mod of operation, which is to run diesel during the week as we have been while still meeting the minimum instream flow requirement, which is at 19 cfs this month. Will make adjustments if the lake either continues up or down.

Will speak with those of you who want to attend the teleconference this a.m., 9 a.m. Alaska time, to discuss this project. Please call in to 907-365-0221.



**BLACK BEAR LAKE HYDRO
AGENCY TELECONFERENCE
JULY 5, 2005**

REGARDING SUMMER DROUGHT 2005

Attendees

Angela Gatto – USFS
John Dunker – DNR
Jim Ferguson – ADF&G
Sue Walker – NMFS – NOAA
Greg Mickelson – AP&T
Bob Berreth – AP&T
Glen Martin – AP&T

After a brief update on the lake level, which has risen from a low of -10.9 feet to -9.5 feet over the weekend, with rainy conditions on the island for the last six days, AP&T proposed to continue to operate as they have since June 6, using two diesel plants to supplement the hydro operation and hydro remaining just above the minimum instream flow requirement. More rain is in the forecast for the week. No diesel was used over the weekend, illustrating how quickly this lake can rise from just precipitation. AP&T also noted that by operating at just the minimum instream flow requirement, a foot of water will be used a week when there is no input from nature.

The agencies expressed a concern about the historical downturn of the lake each August and for this reason expressed an interest in having AP&T go below the minimum instream flow requirement now in the hopes of preventing reduced flows in September. AP&T however, prefers to remain with the existing mod of operation because of the license requirement to maintain a

minimum flow of 19 cfs for July in the creek and because the island is receiving rain at this time, which could signal a change in weather pattern for the area.

AP&T will update the agencies once a week on conditions at the lake and on the island. If any change is proposed in the use of diesel for supplementing hydro, the agencies will also be informed of this as it occurs.

Black Bear Lake Hydro – July 12, 2005
E-Mail Memo to Resource Agencies

Dear Agency Representatives,

Weekly update on BBL Hydro. Since our teleconference last Tuesday when the lake was at -9.5 feet, the lake had risen to -8.5 feet and has since been staying around -9.0 feet for 4-5 days. Evidently enough rain to meet the amount of water we are using to meet minimum instream flows is coming into the basin. We are currently operating with one diesel generator at about 2/3 the load we previously had on diesel because of the increase in minimum instream flow requirement (would otherwise have to just bypass the water if we operated diesel as we did in June). We are ahead of the year 2003 lake level, but have to wait another week or two to see if we get by last years lake drawdown curve.

Things are looking reasonable, but we aren't out of the woods yet. Will continue to monitor conditions and update you as necessary, or early next week.

Black Bear Lake Hydro – July 18, 2005
E-Mail Memo to Resource Agencies

Dear Agency Representatives,

Weekly update on BBL Hydro. Attached is the current lake level of Black Bear Lake. Since the first of the month we have risen from approximately -11 feet to our current -8.5 feet. As we have explained in the past, on weekends we go to 100% hydro because loads are so low that the minimum flow requirement easily meets the load. However, this week we will be staying off of diesel until Thursday morning because we need two days before meter reading (Wednesday) with only one source of generation to assure good readings.

Showers continue in the forecast, so we remain optimistic. Will continue to monitor conditions and update you as necessary, or early next week.

Black Bear Lake Hydro – August 1, 2005
E-Mail Memo to Resource Agencies

Dear Agency Representatives,

Weekly update on BBL Hydro.

The lake remains at about -10 feet. We have had good rain for an August, 5.93 inches (wettest July on record for Klawock since recording started in 1999). We are continuing with present operations of using one diesel generator to supplement hydro and maintain the minimum instream flow requirement. Another week or two of this and we can consider going without diesel because it will put us beyond the curve for last year. We would like to be about a week beyond last year and still be around -10 feet, or higher. So for instance, if on August 15, which last year had us at -11.73 feet, we are around -10, or higher, we would consider going to 100% hydro at that time. If the lake rises sooner than this then we would implement 100% hydro earlier. At present, rain is in the forecast for tomorrow night for a couple days.

However, for now we continue with the diesel/hydro SOP.

**Black Bear Lake Hydro – August 8, 2005
E-Mail Memo to Resource Agencies**

Dear Agency Representatives,

Weekly update on BBL Hydro.

The lake has remained around -10 feet with the level today at about -10.25 feet. Rain continued to be fairly good last week. This week is forecasted to be sunny and warm in Southeast, so enjoy.

We are continuing with present operations of using one diesel generator to supplement hydro and maintain the minimum instream flow requirement, which is now at 17 cfs (August). We are presently where we were last year at this time for lake level. If the weather follows last year from this point, we may have some rain in late August but still end up modifying flows for part of September. Hopefully the weather pattern will continue to be more normal and rain will come back sooner than later. Historically, the first two weeks of August see little rain, so this week of good weather is within a normal trend.

We have burned quite a bit of diesel so far this summer (since June 6) to supplement the hydro which has helped get us to this point. Last year we started supplementing with diesel on August 9. We are considering reducing hydro flows by 5-8 cfs to conserve water possibly later this week. We will keep you informed should we change operations.

However, for now we continue with the existing diesel/hydro formula.

**Black Bear Lake Hydro – August 10, 2005
E-Mail Memo to Resource Agencies**

Dear Agency Representatives,

Additional update on BBL Hydro.

We went to supplemental diesel 24 hours a day as of Monday, August 8. As the attached chart shows, we get down to just above 11 cfs at night (or early morning) and then go above the minimum instream flow of 17 cfs during the day. The Tenants Method lists Excellent as 50% of the monthly average (pre-project). That would be 11 cfs for this project. Because of low loads on the weekend, we still anticipate going 100% hydro on weekends, but returning to supplemental diesel on Monday. However, this may also depend on weather. This is all geared toward making an effort to not go below the minimum instream flow requirement in September.

Will keep you posted.

Black Bear Lake Hydro – August 15, 2005
E-Mail Memo to Resource Agencies

Dear Agency Representatives,

Update on BBL Hydro.

We continue to supplemental with diesel 24 hours a day. The lake is down to -11.9 feet, the same as last year for this time. Last week was very dry. This weeks forecast is for rain all week. Webcam shows heavy clouds near Craig, so hopefully this is the case. We are going to operate with two diesels now, so that the maximum instream flow will be about 17-18 cfs during the day instead of up to 25-26 cfs during the day we operated at last week. Night-time flows will still get down to about 11 cfs at its lowest. During the day we will be at or above the August minimum instream flow, but at night we will go below.

Black Bear Lake Hydro – August 22, 2005
E-Mail Memo to Resource Agencies

Dear Agency Representatives,

Update on BBL Hydro.

The lake has stabilized since last week as it has remained above -12 feet as of this a.m. The lake level is currently rising. At this time last year we were at -13.4 feet. We continue to operate with two diesel generators, one unit 24/7 and the other unit during the day only. We will continue with this diesel/hydro combination at this time.

Will keep you posted if things change.

In summary, the resource agencies have been willing to allow BBL Hydro to go below the minimum instream flow requirement as early as June to make sure enough water was available for September. Balancing this option with the cost of diesel generation, we determined that using supplemental diesel while maintaining the minimum instream flow was a prudent method to stay within our license requirement and yet try to reduce the lake drawdown until rains would begin. Diesel began being used on June 6, whereas last year supplemental diesel began on August 9. However, the drought has continued, although July was a good month for rain having kept the lake up to where we are currently at, which is above last years drawdown. The first 2-3 weeks of August have been very dry. On August 8 we decided to start supplementing with diesel 24 hours a day and use two generators during the day and one at night. At night the minimum instream flow is not met, dropping from above the required 17 cfs to just above 11 cfs. During the day we operate above the minimum instream flow requirement. August 8 is when we were first out of compliance with our license. The outlook is good however, but we must continue to not meet the minimum instream flow requirement during the early morning hours at this point until we gain another foot or two of lake elevation.

For this reason, we submit this request for a temporary waiver to operate below the minimum instream flow requirement due to low flows in this basin.

If conditions change during your review and public notice process so that we can provide the minimum instream flow consistently, we will immediately notify you to cancel the application for a temporary waiver.

Respectfully Submitted,



Glen D. Martin
Compliance Manager
(360)385-1733 x122
(360)385-7538 fax
glen.m@aptalaska.com

Cc: Susan Walker, NMFS
Jackie Timothy, DNR
Jim Ferguson, ADF&G
Kevin Brownlee, ADF&G
John Dunker, DNR
Angela Gatto, USFS
Eric Grossman, USF&WS
Bob Grimm, Pres – BBL Hydro
Vern Neitzer, Senior Engineer
Bob Berreth, Electrical Engineer



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October 8, 2004

To All Resource Agencies

Re: Operations During Summer 2004
Black Bear Lake Hydro Project

Dear Agency Representatives:

Enclosed is our report on our operations at Black Bear Lake Hydro this last summer when because of lack of precipitation or inflow to Black Bear Lake it was necessary to go below the required minimum instream flow starting on September 1. On September 21 we were again operating at the required minimum 24 hours per day.

We would like to have a teleconference to discuss this years operations and the report. During the first week of November when would everyone be available?

Sincerely,

Glen D. Martin
Project Compliance Manager
(360)385-1733 x122
(360)385-7538 Fax
glen.m@aptalaska.com

BLACK BEAR LAKE HYDRO SUMMER 2004 OPERATIONS

This letter and enclosures constitutes the summary of Summer 2004 operations of the Black Bear Lake Hydro Project, No.10440. As you know, this year in Southeast Alaska a similar drought to last year occurred and Prince of Wales Island (POW) was particularly impacted. Although the snowpack this year was well above last year, 91” to 67” respectively, as shown in the Table below, snowpack was still below the average for this basin which has averaged 110” over the last eleven years. In comparison, snowpack in 2002 was 154” with a water content of 57.3%.

SNOW COURSE	ELEVATION	DATE	THIS YEAR		LAST YEAR		
			SNOW DEPTH	WATER CONTENT	SNOW DEPTH	WATER CONTENT	

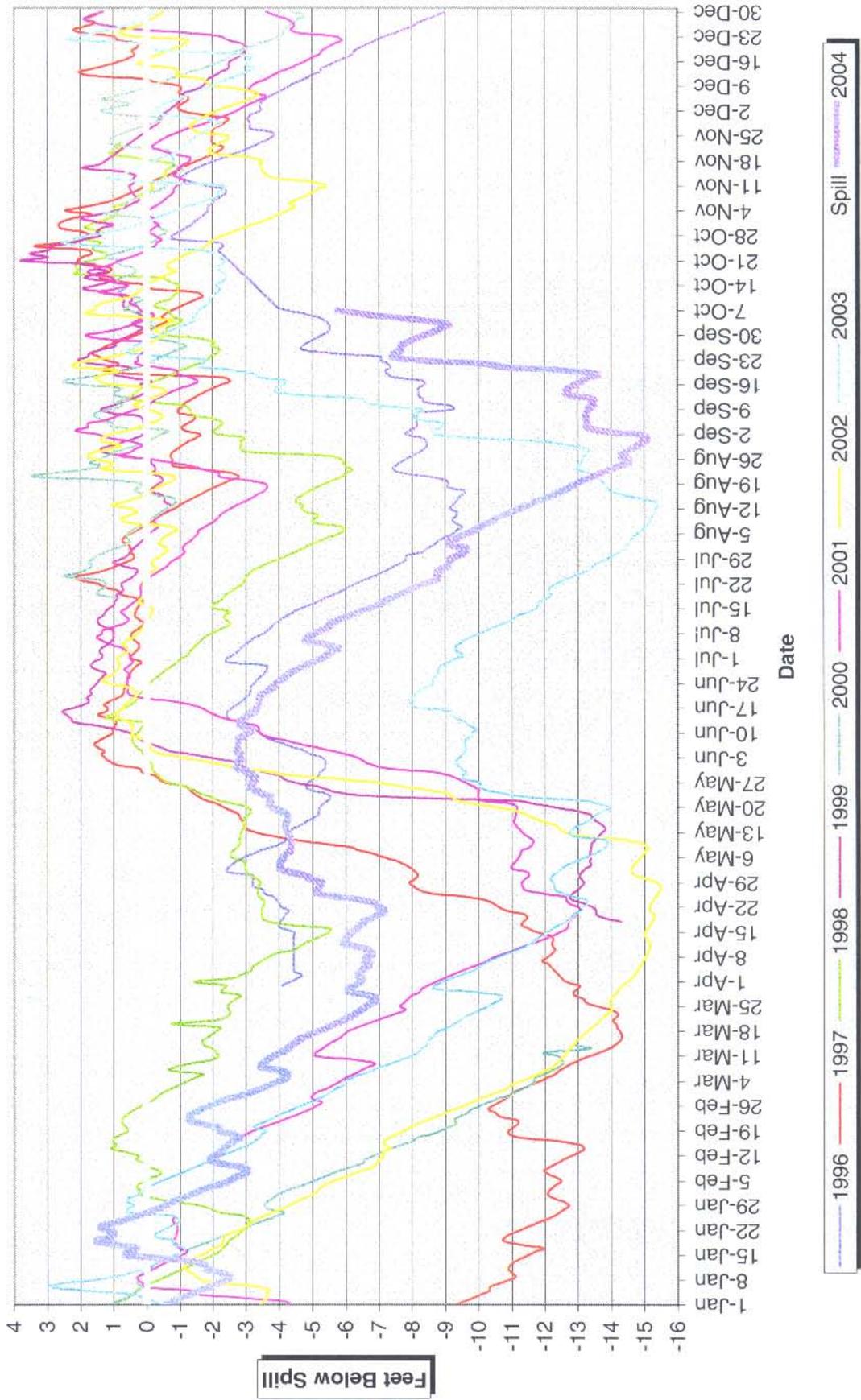
SOUTHEAST							
Cropley Lake	1650	3/31/04	90	30.0	47	17.8	
Eagle Crest	1000	3/31/04	60	18.0	23	11.4	
Fish Creek	500	3/31/04	11	2.1	2	0.4	
Lake Grace Pass	1700	4/06/04	118	51.7	72	27.3	
Lost Lake	430	4/06/04	33	12.7	68	26.0	
Mint Creek Ridge	1900	4/06/04	91	36.3	67	24.6	
Moore Creek Bridge	2250	3/30/04	83	26.7	41	12.2	
Petersburg Reservoir	550	3/29/04	0	.0	0	.0	
Petersburg Ridge, S.	1650	3/29/04	73	28.0	41	12.9	
Speel River	280	3/31/04	85	33.0	57	20.4	
Upper Swan Lake	1700	4/06/04	24	9.1	22	8.9	

HISTORICAL SNOWPACK FOR MINT CREEK RIDGE

DATE	SNOW DEPTH	WATER CONTENT
3/29/94	85	30.6
5/03/95	88	40.0
4/03/96	53	17.8
4/10/97	127	54.8
4/03/98	66	26.0
4/15/99	209	81.3
5/03/00	154	69.4
5/04/01	113	48.6
4/03/02	154	57.3
4/02/03	67	24.6
4/06/04	91	36.3

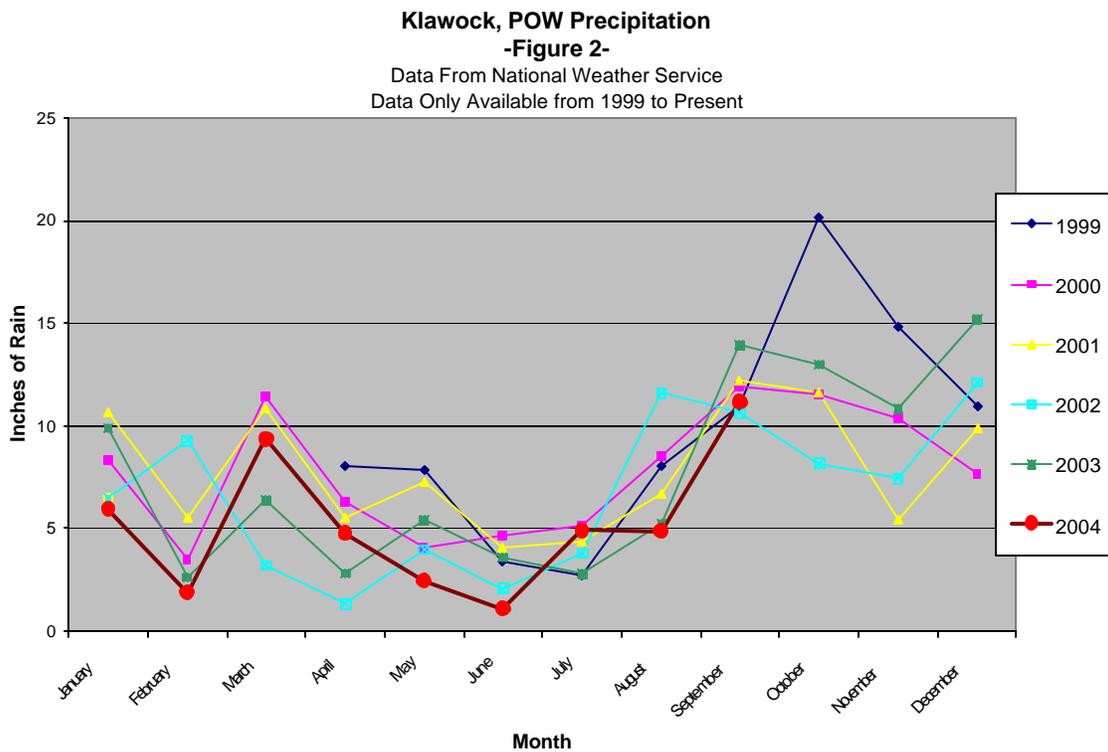
Below in Figure 1 are the historical lake levels for Black Bear Lake since operations began. As can be seen, the lake did not go anywhere near as low as it often has in the spring, and despite this and the increased snowpack the lake only filled an additional 5 feet above last year. The lake level spike in January 2004 was the result of almost 6-inches of rain at the Klawock gauge, which may have combined rain and thaw at the lake. The most likely reason for plateau in the spring lake elevation is the precipitation that usually accompanies the spring thaw was significantly lower, reducing inflow to the lake. The nearest National Weather Service rain gauge is in Klawock, 15 miles southwest of the Project. Klawock precipitation

Black Bear Lake Level



totals are shown in Figure 2. In the past the lake has filled to spill in late May or early June, however, the last two years there has neither been adequate snowpack or spring and summer precipitation to fill the lake as it normally does. As can be seen in Figure 1 above, this year the lake level reached a plateau in which it only gradually climbed a little over one foot for most of May and then for half of June where the lake level stayed fairly steady. This clearly shows the lack of precipitation that occurred at this time. Discussions began in June regarding the potential of going to diesel generation in August. We have had to rely on diesel generation during the month of August two years in a row (2003-2004). This is unusual and it is expensive considering the cost of fuel these days.

As mentioned, spring runoff was able to fill the lake 5 feet more than last year, which we took as a good sign that this year would be different. However, we didn't factor into the equation the significantly lower precipitation in May and June, as shown in Figure 2 below.

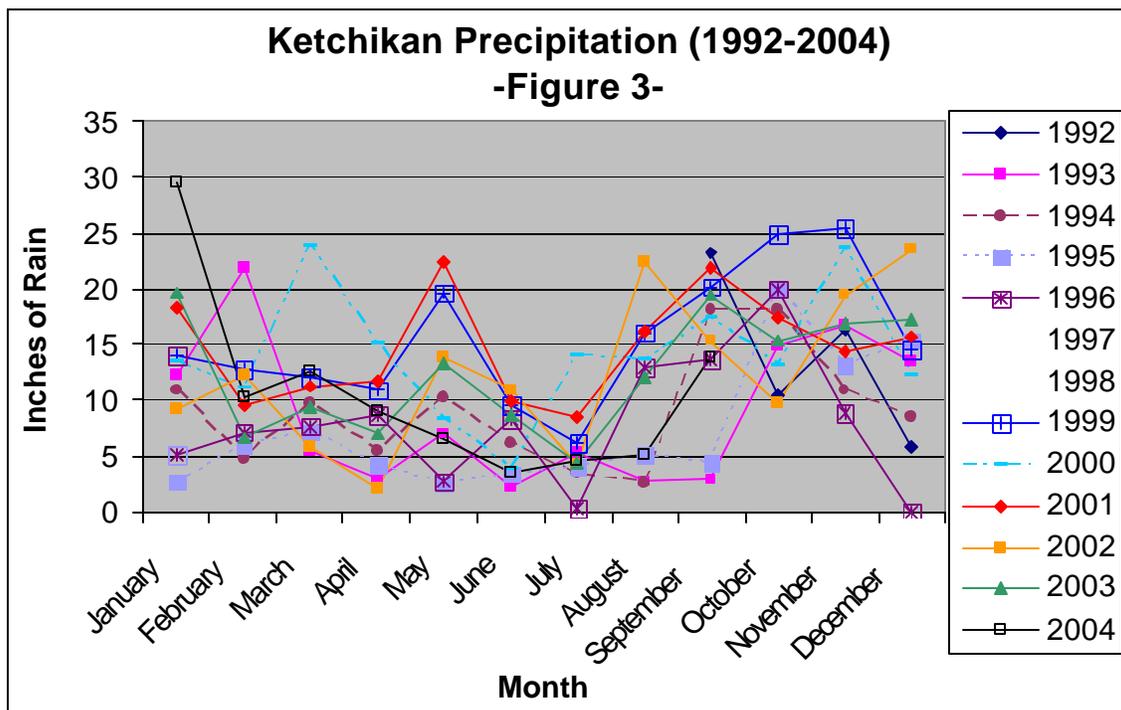


The low precipitation shown in the above table we were only in general terms tracking because we had more water than last year and assumed this year would be that much better with a reasonable margin of safety. However, precipitation was even lower this year (13.36") than last (17.05") for the period May through August. In early June we discussed operating diesel generators in August if conditions continued, believing this would be prudent. Funds were allotted for the use of up to 30,000 gallons of diesel in case this was necessary. So there was some early acknowledgement that the trend we were seeing was disconcertingly similar to last summer. Another assumption we made is that because historically by late August rains began in earnest, and even last year during

that drought rain came by the end of August, we expected the same to occur this year and that no reduction in the minimum instream flow would be necessary. We prudently used diesel early in the month in order to slow the lake drawdown, but despite this, this year was even more abnormal than last year. More than 60% of September's precipitation occurred from September 20th – 30th, whereas last year the month of September had significant precipitation, with 59% occurring in the first half of the month.

Observations made around POW were consistent, that all watersheds had lower than normal flows. According to the U.S. Forest Service, salmon were observed schooling at the mouths of many streams and rivers, waiting for flows to increase for their spawning runs and some were observed dying (Harris River) due to being trapped in shallow pools in oxygen depleted water.

For correlation, a comparison of Ketchikan's precipitation shown in Figure 3 below also shows a significant drop in May and June and remained low for July and August, compared to last year's precipitation. Precipitation for Ketchikan was 19.82" this year compared to 38.55" for the same May through August period last year. Many have called the Summer of 2004 the best summer on record because of the record number of days above 80°F and 70°F. The weather was beautiful but also contributed to forest fires in the Alaskan interior.

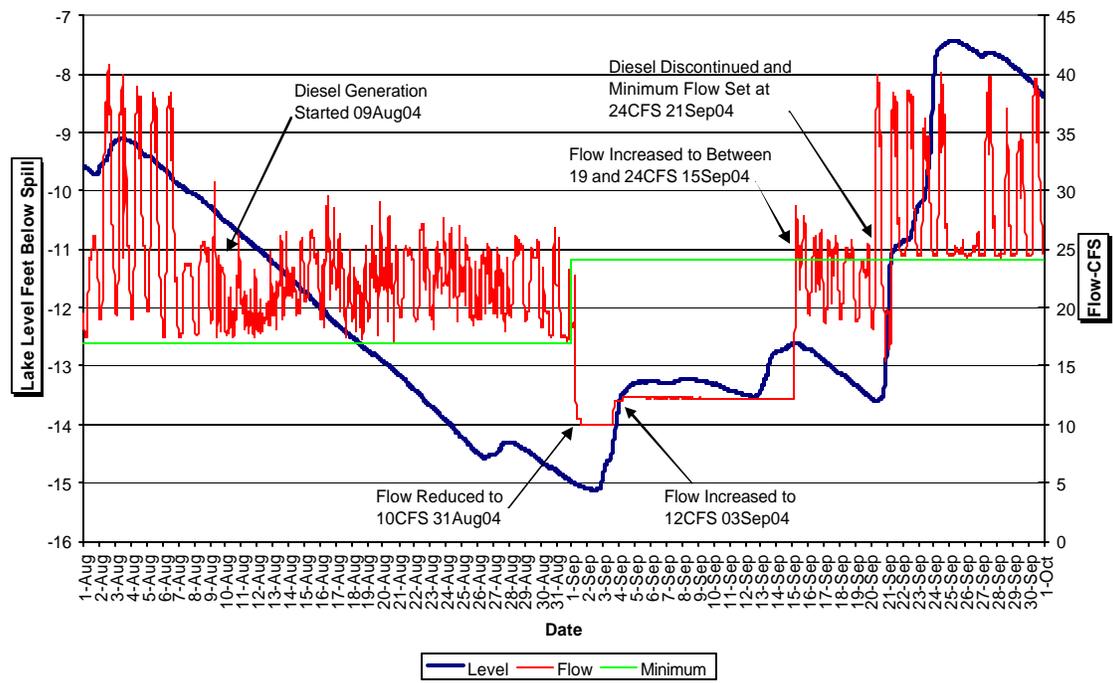


Diesel generation began on August 9 because the lake continued to go down from the lack of precipitation. By the end of August, with rain forecasted but the lake below 14 feet, we knew we couldn't continue to meet instream flows with the September requirement of 24 cfs and maintain our siphon for very long. A teleconference was initially held on August 31 to discuss the situation with the resource agencies and get

approval to drop below the license requirement on September 1. Figure 4 below shows how the project was operated from prior to going to diesel to ending the reduced flow regime in September. Other teleconferences to update, discuss, and inform the resource agencies were held on September 2, 9, and 13. An e-mail was distributed on September 16 further updating the resource agencies. Also on September 16 we made an electronic filing with FERC requesting a temporary waiver of the license article requirement of meeting 24 cfs for the month. Although we had dropped below -15 feet, which is the minimum license approved drawdown, by the time of this filing we were again above -15 feet, so only a waiver of instream flow was requested. On September 21 an e-mail was sent to the resource agencies notifying them that the project was back to operating at 24 cfs 24/7. A notification was also sent to FERC informing them that we were back in compliance with our license and we requested that the waiver request of September 16 be withdrawn.

As referenced above, Figure 4 below shows the correlation between lake level and water used, or flow. Figure 4 illustrates that we went to diesel generation before we had even reached -11 feet. We had 4 feet of water available, but we went to diesel generation. I think this illustrates that we operated this hydro project as responsibly as possible under the circumstances. If it had started to rain in earnest by the end of August as it did last year, and historically it has rained in August, we most likely wouldn't have gone below -15 feet and would not have had to reduce flows below the minimum. If it had rained earlier, the diesel might have been considered wasted, but that is the challenge and gamble with operating a hydro project, you don't know what Mother Nature is going to do and rely on historical data. We believe we did a good job of managing the resource.

FIGURE 4
Black Bear Lake Level/Flow Summer 2004



Environmental Surveys

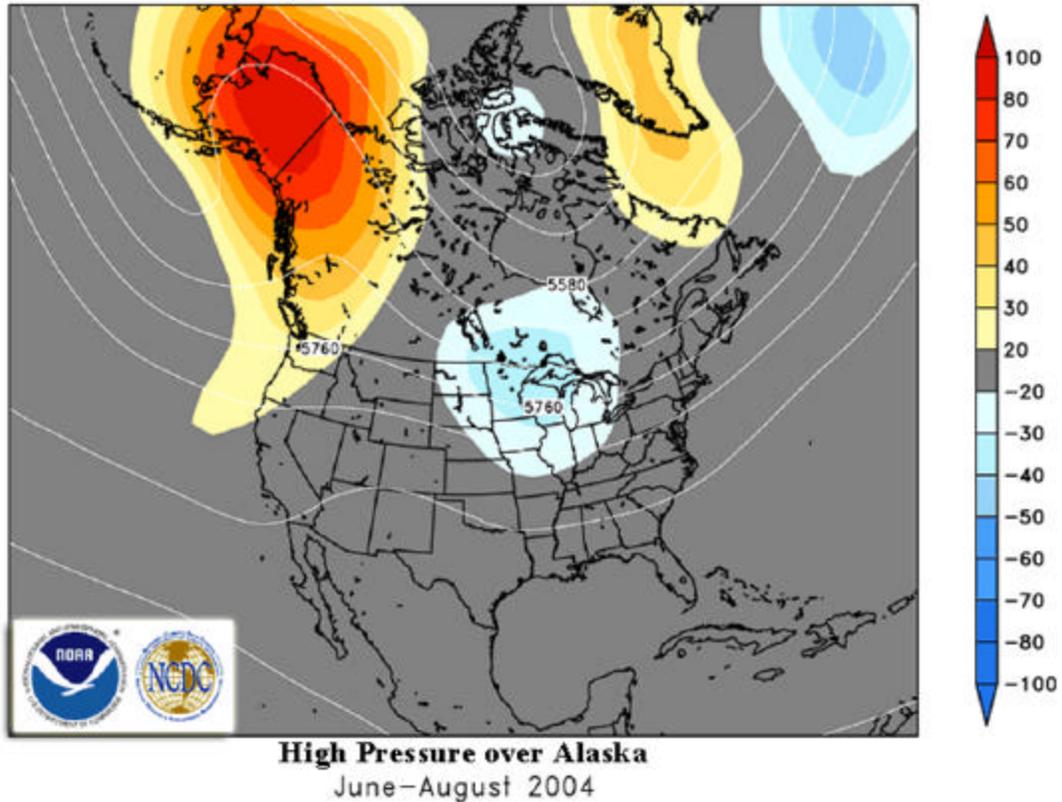
The environmental surveys were conducted by Shawn Williams, our telephone technician who also conducted the escapement surveys in Black Bear Creek for 4-5 years. Photos are included at the end of this report. Only a few fish were observed during the pre-flow cutback environmental survey on August 31, 2004. On each subsequent environmental survey more fish were observed each time, but the numbers remained small. Thousands of fish were observed on September 17 below Black Lake coming up from Big Salt Lake, perhaps because of the increased flows starting on September 15 to between 19-24 cfs. After flows were up to 24 cfs for 24/7, operational flows actually increased to as much as 40 cfs, providing significant flows to allow fish to move upstream.

Up until September 1, 2004, flows were at or above the instream minimum set for August. However, diesel generation had started on August 9 to augment hydro generation, allowing us to reduce the amount of water used to the minimum instream flow. On September 1, when the instream flow requirement went from August's 17 cfs to September's 24 cfs, we reduced flows to 9.6 cfs (31% of historical September flows; described by the Tenants Method as Fair to Degrading at 30%) after discussing this with the resource agencies the day before. The 9.6 cfs was initially still above the amount entering the lake. However, after two days of operating at 9.6 cfs enough water was coming into the lake due to precipitation to fill it by approximately 2 feet and because the lake continued to rise, on September 3 flows were increased to 12 cfs (39% of the historical September flows; described by the Tenants Method as Good at 40%). On September 15 flows were again increased. During the day flows were 24 cfs, but during the early morning hours flows were ramped back to 19 cfs before again increasing to 24 cfs during the day. Changes were made at 1 cfs intervals each hour. The rest of the load was still supplemented by diesel generation. On September 21 instream flows were returned to 24 cfs 24/7.

The below Figure 5 shows how high pressure in Alaska for this summer was well above normal, providing for a drier environment that not only fueled the Interior fires but led to the drought on Prince of Wales Island.

FIGURE 5

500 Millibar Heights and Anomalies (in meters)
(From NCEP Reanalysis)

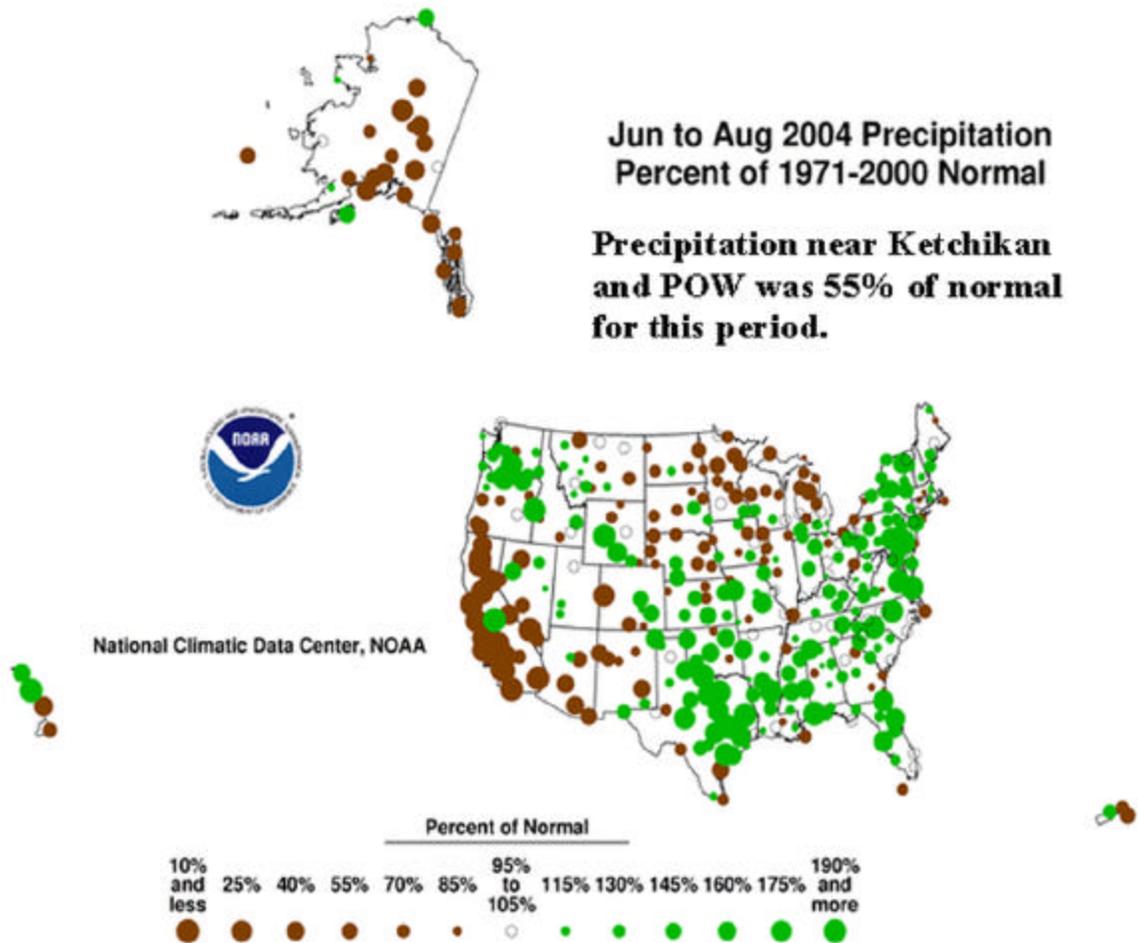


A quote from the NOAA website below:

National Drought Summary -- September 21, 2004

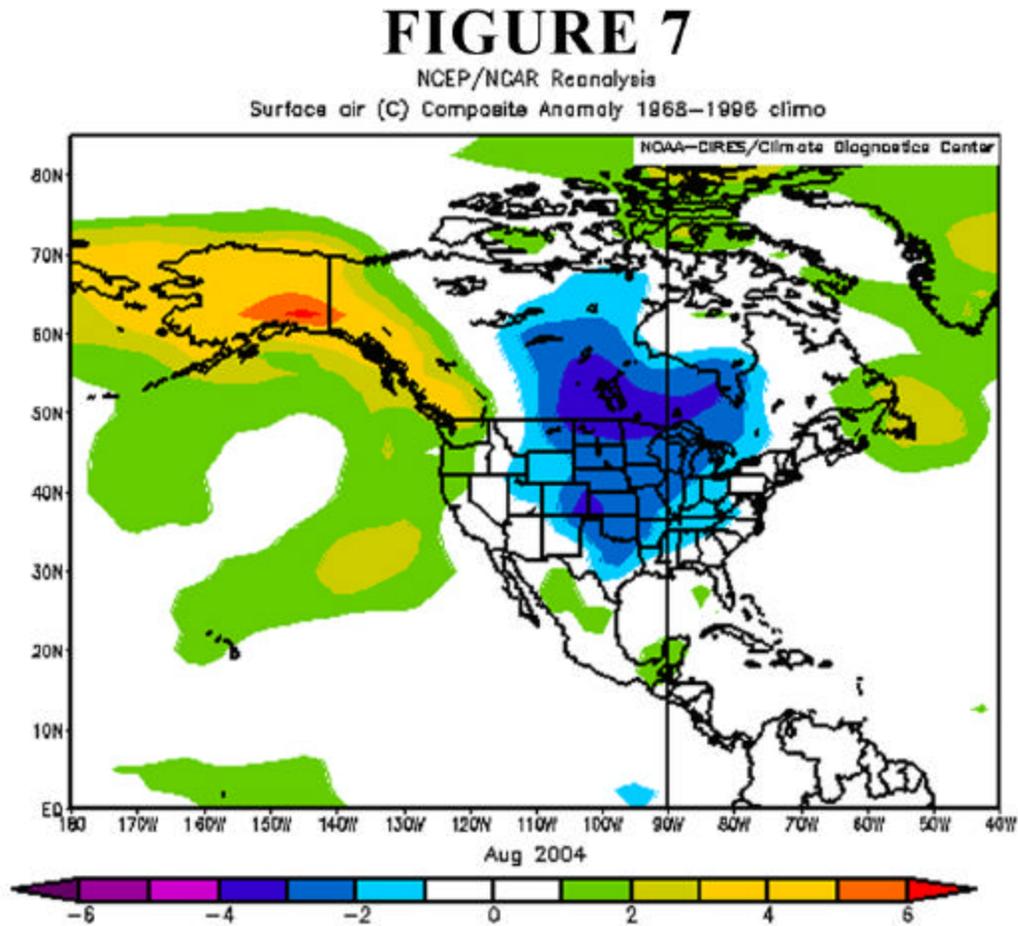
Alaska: Cool, showery weather settled across much of Alaska, virtually ending the threat of additional wildfire activity. Nearly 6.4 million acres of vegetation burned in Alaska during the summer of 2004, easily surpassing the 1957 state record of 5.1 million acres. Despite the end of the wildfire season, abnormal dryness persisted across much of eastern Alaska. Following Fairbanks' third-driest June-August period (1.81 inches, or 37% of normal) in the last half-century, 0.80 inch (94% of normal) fell during the first 21 days of September. Fairbanks' year-to-date precipitation through September 21 was 5.55 inches (72% of normal).

FIGURE 6



The above Figure 6 shows the percentage of precipitation above or below normal, based on records from 1971-2000. The southern part of Southeast Alaska was at 55% of the normal precipitation for the June through August period.

Temperature data from NCEP / NCAR, shown in Figure 7 below, shows surface temperature anomalies in Southeast Alaska of from 4°F to 7°F above normal for August 2004.



Summary

From the information we have gathered, it is evident that this year and last year were very different from the recent historical record available. There are a couple years in the Ketchikan precipitation data, 1993 and 1995, in which the summer precipitation totals were also very low from May through September. This does show that on occasion summers can have low precipitation and suggests that the averages this projects minimum instream flows were based on were averages that really did not address these “dry” events.

This year there were a record number of days of warm, sunny weather throughout Alaska, and in particular on Prince of Wales Island, which is typically known for wet and cool summers. There is no way to know if this is a short or long term trend, or merely a brief anomaly in the history of precipitation in Southeast Alaska. However, there are numerous signs, i.e. melting ice cap and glaciers, low humidity for long periods of time and long lasting high pressure systems that there is warming going on, whether short term or long is any ones guess. With the two low water years in the Ketchikan data, 1993 and 1995, it is possible this is only a minor event that could occur once a decade.

What has become apparent in investigating climatology for Black Bear Lake Hydro is that following El Nino and La Nina events (as we said we would do in last years report) is not by any means an indicator of more or less precipitation, despite the widely held layman's belief that this is the case. As described to us by a weather scientist,¹ El Nino and La Nina precipitation amounts and location is like a shotgun blast, meaning it is scattered all over the spectrum. So this solution, to follow these events to forecast precipitation, is not highly reliable. However, if either event is forecast to be strong, there is more probability in their prediction models. Based on that, 1999 and 2001 were strong La Nina years and had higher snowpacks than the strong El Nino years, 1994² and 1998 where there was low snowpack. The problem is that the strength of these events varies event to event, providing little useful information unless it is forecasted to be a strong event. A strong event makes it more likely that above or below normal precipitation can be forecasted with any reliability. However, there is also no certainty where the precipitation is going to occur, which is part of the "shotgun blast" analogy mentioned above, it's just more likely to occur if it is considered a strong event. This shows how although this information is interesting and potentially useful, it is not like there is a 90% probability, but more likely up to a 43% probability (for a strong event it would be above 43%) when these forecasts are made.³

Temperatures however can be more accurately forecasted. Although again, getting a correlation with annual precipitation is difficult. Warmer temperatures could lead to a lower snowpack, or more snow, depending on the temperature, i.e. too cold to snow versus warm enough to snow. Warmer winter weather may also cause rain versus snow, or an early and faster thaw in the spring, changing when the water is available. Temperature anomalies are easier to forecast with a greater measure of accuracy than forecasting precipitation, but this is by no means a conclusive way to predict precipitation.

We can and will follow the National Weather Service Seasonal Outlook forecast and Climate Prediction Center to have an idea if any temperature anomalies are predicted and El Nino and La Nina events. With that information in hand, i.e. warmer, normal, or colder temperatures, we can then follow snowpack and monthly precipitation totals and once we have developed a pattern of forecasts and actual conditions over many years we may have a useful tool to help plan hydro operations. However, this is still conjecture and if professional weatherpersons have difficulty predicting these events and what they mean for a particular geographic region then it will not be any easier for us. For example, an El Nino event is forecast for this winter, 2004-2005. Temperatures are forecasted to be warmer than normal. However, there is no site specific forecast nor is it certain what it will mean in regards to precipitation. We will have to wait and see and follow the above mentioned resources.

¹ Tom Pagano, Western Climate Center, USDA, personal communication (e-mail) on September 28, 2004.

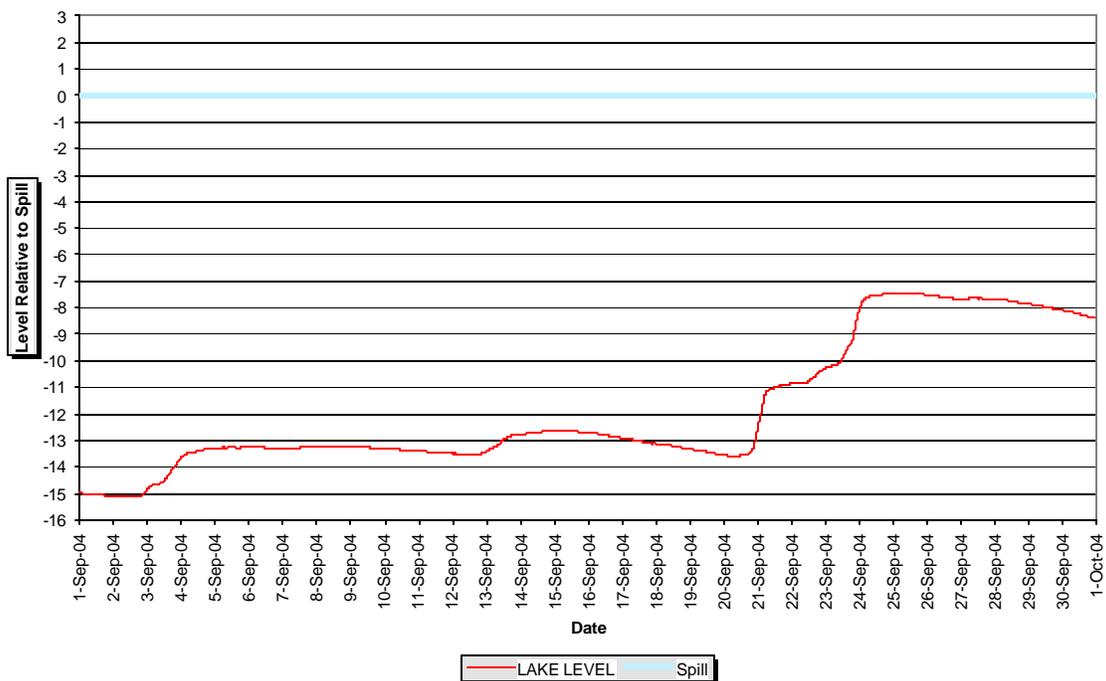
² It is interesting to note that 1994 had dry summers on either side of it, perhaps indicating influence from the strong El Nino event.

³ These percentages are not what they seem. A 43% forecast is actually 10% above normal; normal is 33.33%; below normal by 10% would be a 23% probability.

We will also continue to evaluate in February-March whether to use diesel generation in March-April and will evaluate the summer operations based on data collected in early June each year from the above three sources to determine, as best we can, what to expect for the summer.

In regards to a lake level model, below is a chart showing the Black Bear Lake levels for September. As you can see on September 21 and again on September 23 the lake elevation rose significantly in a short period of time. This lake is very flashy with only 3000 acre feet available for hydro. Considering historical precipitation for September we believe we operated the project very responsibly this summer. As I understand lake level models, there is a rule curve that is followed where you start at full and end up at full and adjust operations to follow the curve in between. Black Bear Lake would be difficult to operate this way. We would never be able to keep the lake from going above the rule curve, because as you can see in Figure 1 above, the lake fills quickly despite our operating at full load. Only during dry years, when we would have to use diesel, would we have a chance of following a curve. However, if precipitation had occurred this year as it has in the past we would not have had to reduce flows below the required minimum in September. We did very well in operating the project so closely to a point where historically significant precipitation would have occurred. In fact, we got within two weeks because on September 15 we were again up to the minimum instream flow, i.e. 24 cfs, for the day and then dropping to 19 cfs in the early morning hours (only because we were being cautious). This lasted for another week before returning to 24 cfs 24/7. We don't believe a lake level model is practical or reasonable for this project.

Black Bear Lake Level-September 2004



From the data presented above, it is clear that predicting weather is not an accurate science. If we were to reduce project operations earlier in the year based on an assumption that conditions could be dry at a certain time (which in retrospect is actually what we did; we made the assumption there wouldn't be enough water until the end of August), we may use diesel and then find that there was plenty of precipitation and have wasted water and/or would have charged our customers for the cost of diesel when it wasn't necessary. As we write this a barrel of crude oil is up above \$53. Diesel is becoming very expensive for our customers. The 30,000 gallons we had for this drought came at a cost of \$42,000. We believe the method of operation we chose this summer was well managed and prudent considering the circumstances.

Teleconference Summaries and E-Mails

Black Bear Lake Hydro – August 31, 2004 – 16:30 Resource Agency Teleconference

Participants: ADF&G – Kevin Brownlee
USF&WS – Mark Voight
USFS – Erik Spillman, Angela Gatto
AP&T and BBL Hydro, Inc. – Bob Grimm, Bob Berreth, Glen Martin

AP&T described the current conditions at Black Bear Lake. The lake elevation is at -14.8 feet. Baseline environmental information was collected today to have prior to any reduction in flows. Another environmental survey will be conducted Thursday after the flow reduction has occurred for 24 hours. Further environmental surveys will occur once a week unless further flow reductions occur, which will be followed in 24 hours by an additional environmental survey. Weather today is sunny on Prince of Wales Island with rain forecasted for tomorrow, Wednesday night through Friday night with showers over the weekend. Chance of rain during the Wednesday through Friday night period is about 100%. There is no way to know however, how much rain there will be.

It was noted that last year reduced flows were started by the second week of August. Based on more water being in the lake this year and getting through to the end of August, AP&T believed rains would resolve this situation without the need for this teleconference. Rains last year came by the end of the month, which was also a very dry year. This year rains have not contributed enough by the end of August to give relief. The average inflow to Black Bear Lake for August was 6.6 cfs, well below the required minimum flow. AP&T decided to start using diesel generation on August 9 this year to supplement hydro to slow the lowering of the lake. However, because of current lake conditions, AP&T requests a temporary reduction of the September minimum instream flow, normally at 24 cfs, to 9.6 cfs.

When asked how long AP&T could operate at 9.6 cfs before the project would have to shut down, AP&T responded that they could go about 10 days, but would request a reduction in this flow before then to prevent a shutdown from occurring if rains do not materialize in the next day or two.

When asked what the agencies thought of 9.6 cfs, it was pointed out that AP&T should determine what they feel comfortable operating at and let the agencies know. AP&T decided 9.6 cfs would be the best place to start considering the present lake level. This change would occur tomorrow, September 1. As mentioned, another environmental survey would be conducted Thursday, September 2, 24 hours after the flow reduction occurs to better document the conditions of the reduced flow on Black Bear Creek. When the collected environmental information becomes available it will be electronically forwarded to the resource agencies. Another teleconference will be held on Friday, September 3 at 9 a.m. Alaska time to update all parties. Please dial into the same number, 907-365-0222.

Black Bear Lake Hydro – September 3, 2004 – 10:00 Resource Agency Teleconference

Participants: ADF&G – Steve McCurdy, Steve Hoffman
USFS – Angela Gatto
AP&T and BBL Hydro, Inc. – Bob Grimm, Bob Berreth, Glen Martin

AP&T described the current conditions at Black Bear Lake. The lake elevation is just above -15 feet. Inflow to the lake since the reduction in instream flows to 9.6 cfs has allowed the lake to fill by four-tenths of a foot. An environmental survey of Black Bear Creek yesterday, but the data isn't yet available (photos). Attached are photos of the staff gauges from August 31, 2004, prior to reducing flows on September 1.

AP&T proposes to maintain the 9.6 cfs at this time and may change this over the weekend, depending on the inflow, either increasing the instream flow or decreasing as necessary. Rain is in the forecast over the next 3-4 days. Another teleconference will be held on Tuesday, September 7, 2004, at 9 a.m. Alaska time.

Please dial into the same number, 907-365-0222.

**Black Bear Lake Hydro – September 7, 2004 – 10:00
Resource Agency Teleconference**

Participants: USFS – Angela Gatto
DNR – John Dunker
AP&T and BBL Hydro, Inc. – Bob Grimm, Glen Martin

AP&T described the current conditions at Black Bear Lake. The lake elevation is at approximately -13.3 feet. On Friday at 4 p.m. AP&T increased flows to 12 cfs. The lake remained steady all weekend through Monday, which indicates inflow is approximately 12 cfs. The forecast is for rain showers on POW all week, although it is uncertain how much rain there will actually be. Ms. Gatto reported that fish were not accessing other systems on the island because of low flows, although these are also probably getting some relief now that the rains have started. We discussed the South Fork of Black Bear Creek and its contribution, which if Black Bear Lake is getting 12 cfs, we estimate that South Fork is contributing 20-30 cfs.

AP&T doesn't yet have the environmental survey of Black Bear Creek from last Thursday, but should have it shortly. AP&T proposes to go to 24 cfs once the lake has reached -12 feet. If they are still operating at less than 24 cfs by next Tuesday, September 14, a filing will be made with the Commission for a temporary waiver of this license condition.

The next teleconference is scheduled for Monday, September 13, 2004, at 9 a.m. Alaska time.

Please dial into the same number, 907-365-0222.

**Black Bear Lake Hydro – September 13, 2004 – 10:00
Resource Agency Teleconference**

Participants: USFS – Angela Gatto
USF&WS – Mark Voight
AP&T and BBL Hydro, Inc. – Bob Grimm, Bob Berreth, Glen Martin

AP&T described the current conditions at Black Bear Lake. The lake elevation is at approximately -13.2 feet. The lake level fell through the weekend, but has risen since late yesterday, getting back to about where the lake was early last week. The forecast continues to be for rain and is currently raining on POW with an average of 0.5 inches per day on Saturday and Sunday (in Klawock). AP&T continues to operate at 12 cfs. AP&T would like to return to higher flows as soon as possible because of the cost of diesel generation, however, AP&T has been reluctant to go back to 24 cfs without being sure they will not have to again reduce flows, because that will encourage fish to enter the creek and then perhaps be stranded with any reduction. Operational flows are expected to be returned to 24 cfs in the next two days, if rains continue as they are.

AP&T will issue an environmental report consisting mainly of photos of before and after images taken of Black Bear Creek. AP&T has conducted the environmental surveys once a week after flows were reduced on September 1, except for the first week when before and after photos were obtained.

Assuming that AP&T will be able to return to the licensed bypass flow of 24 cfs in the next two days, an e-mail notification will be sent to all parties at that time. Further updates will occur via e-mail as teleconference attendance has dropped off. Hopefully we will shortly be back to operating normally.

**Black Bear Lake Hydro – September 16, 2004
Resource Agency E-Mail**

Dear Agency Representatives,

Yesterday, Wednesday, September 15 at 6 a.m. Alaska time we increased flows at Black Bear Lake Hydro to approximately 24 cfs and continue to supplement the load with diesel generation. At night as the load falls we allow the hydro project to carry the load which drops to about 19 cfs by 2-3 a.m. The flow changes approximately 1 cfs per hour and after 3 a.m. is again increasing to around 24 cfs for the day. By doing this it allows us to do two things, (1) to provide more water for the escapement runs and partially meet the license required 24 cfs; (2) to reduce our use of diesel fuel at night, which is expensive, emits pollution to the air, and noise in otherwise quiet communities. We believe this conservative approach is still providing benefit to the escapement while also ensuring a sustained flow rather than possibly reducing flows in the future if these conditions continue. We believe, considering the time of year, that sometime in the next 5-7 days we can operate at or above 24 cfs.

The lake level is at approximately -12.7 feet, as shown in the chart below. The lake level has not performed its usual dramatic rise, even for this time of year. We do have 2 feet of buffer, but remain cautious about when the weather will make a significant turnabout to normal precipitation levels. If we were at -12 feet, we would certainly increase to or above 24 cfs 24/7, but remain hesitant until we are nearer this goal. Because this has been on going for two weeks and is going to continue in the short term, we will be making a filing with the Commission requesting a temporary waiver of the minimum instream flow requirement, even though before they even process our request we will likely be asking them to withdraw the request, as occurred last year.

We appreciate your consideration and understanding of our efforts to manage the water in this basin. Comments are welcome.

**Black Bear Lake Hydro – September 21, 2004
Resource Agency E-Mail**

Resource Agency Representatives,

At Black Bear Lake Hydro this morning we increased flow to 24 cfs 24/7. Yesterday we picked up two feet of water so we are comfortable staying at or above 24 cfs. I will be working on a report and setting up a teleconference to discuss down the road.

Thank you for your input and support.

List of Literature

Climate Monitoring Reports and Products, National Climatic Data Center, NOAA.

Current El Niño and La Niña related Climate Predictions and Forecasts, NOAA.
www.pmel.noaa.gov/tao/elnino/forecasts

Climate Diagnostics Center, NOAA, El Niño Information.
www.cdc.noaa.gov/ENSO/enso

Illustration of the High Pressure Anomaly over Alaska for June through August 2004, U.S. Climate Monitoring, National Climate Summary, June-August, 2004, National Climatic Data Center, NOAA.

Illustration of the Percentage of Precipitation for June through August above or below Normal, based on records from 1971-2000, National Climatic Data Center, NOAA.

Ketchikan Precipitation Data, 1992-2004, Alaska Regional Headquarters, National Weather Service.

Klawock Precipitation Data, 1999-2004, Alaska Regional Headquarters, National Weather Service.

Maps of temperature anomalies in Alaska, Climate Prediction Center, National Centers for Environmental Prediction, National Weather Service, NOAA.
www.cpc.ncep.noaa.gov/products/predictions/multi_season

Maps of U.S. Drought Conditions, U.S. Drought Monitor Center, NOAA, USDA.
www.drought.unl.edu/dm/monitor

NOAA Announces the Return of El Niño, September 10, 2004, NOAA News, NOAA.

Rick McClure, Data Collection Officer, Natural Resource Conservation Service, USDA, Alaska Snow, Water, and Climate Services, Snowpack Reports.

Tom Pagano, Western Climate Center, USDA, personal communications via e-mail.

**PHOTOS TAKEN DURING
ENVIRONMENTAL SURVEYS**



A subsidiary of Alaska Power & Telephone Company.



Summary of Operations – Summer 2003

This summary is for operations during the summer of 2003 drought in which the project drew the lake below the -15 foot maximum drawdown licensed and also reduced flows in Black Bear Creek to below the required minimum instream flow for the month of August (17 cfs) and first day of September (24 cfs). Below is a chronological history of what occurred.

On July 28, 2003, when the lake level reached -13 feet, we determined that we had something very unusual occurring and decided to cut our use of water back to the monthly minimum instream flow requirement of 19 cfs. To do this we informed Alaska Power Company, whom BBL Hydro, Inc. has an energy contract with, that they would need to begin using their backup diesel generation until inflow to the lake returned to the minimum instream flow requirement or higher. Inflows for July averaged about 9 cfs, with lows of below 3 cfs.

On August 1, 2003, we sent the resource agencies the following message [which included as a recipient, John Novak, FERC Department of Hydropower Compliance; whom was also included in all future e-mails]:

“This summer has been a particularly dry one for Black Bear Lake, with an average inflow to the lake for July of about 9 cfs, this is well below the July minimum instream flow of 19 cfs and the August minimum of 17 cfs. This last week the average inflow has been about 3 cfs. We also had a small snow pack last winter to add to this unusually dry summer S.E. Alaska is having. Black Bear Lake is currently down to about -14.3 feet. We have been operating at just the minimum instream flow since July 28. However, even this won't be possible if this weather trend continues.

Presently, there are not many fish entering the system (one chum was noted last Friday). We would like you to consider letting us operate the project at 10 cfs until rains come to the island. Once the ground is saturated (which is normal for POW) it only takes an inch of rain to fill the lake 0.5 feet. So it shouldn't take much to recharge the lake if rains will come. Rains are forecasted for the weekend, but showers have been forecasted for weeks and evidently contributed little to none (averaging about 9 cfs).

I would like to hold a teleconference to discuss this with those of you that can participate today. I will be on the following teleconference line at 11 a.m. Alaska time. 1-888-422-7141. Type in 994653 as a participant when prompted.”

Below is a summary of all the teleconferences that have taken place regarding this situation:

Summary of Operations at Black Bear Lake Hydro – Summer of 2003

August 1, 2003, Noon (PST)

Those attending the teleconference were Tom Capiello [for Joe Klein], ADF&G; Steve Hoffman, ADF&G; Steve McCurdy, ADF&G; John Dunker, DNR; and Erik Spillman, USFS. John Dunker commented that it made sense to him to reduce flows and that when they are involved with projects like this now days they put in a caveat that when flows into the reservoir are less than the minimum instream flow, the project goes to the minimum instream flow. Steve McCurdy said he agreed that by dropping flows now we could prevent fish going in and being stranded or having their eggs dessicated rather than abruptly cutting the water off. I believe Erik Spillman commented that the shut down of the project is likely and that we aren't talking about trading power for habitat here, but completely shutting the project down.

Before making a decision they asked to know how much water South Fork is contributing and how many days the project could operate if we started 10 cfs today. Another teleconference was scheduled for 1:30 p.m. Alaska time today to answer those questions.

Sent the following e-mail before the afternoon teleconference:

*"Folks,
South Fork appears to have about 8 to 9 cfs flowing through it. A photo of South Fork falls is attached. Our estimate for operating at 10 cfs is about 8 days to reach -15 feet. We believe we could go to -16 with no difficulty, but beyond that we would have concerns about a loss of siphon. We can operate the turbine/generator down to about 3 cfs.*

Talk with all of you at 1:30 p.m. Alaska time. 907-365-0223."

August 1, 2003, 2:30 p.m. (PST)

All previous attendees were present and Bob Berreth, BBL Hydro, Inc., joined me. John Dunker said something about a Tenant Method for determining the best instream flow. This method indicates 11.2 cfs would be a better solution than 10 cfs. The consensus was to go to 11 cfs for the weekend and have another teleconference at 11 a.m. Alaska time Monday. We again informed Alaska Power Company of the need for them to utilize more diesel generation to meet their load.

August 4, 2003, Noon (PST)

Tom Capiello [for Joe Klein], ADF&G; Steve Hoffman, ADF&G; John Dunker, DNR; Sue Walker, NMFS; and Erik Spillman, USFS were present. Nothing has changed as far as weather or inflow to the lake. Lake continues to be drawn down. It was determined that we should stay at 11.2 cfs, or as close to or above as we can maintain it, until another teleconference on Friday, August 8. I will send daily e-mails updating everyone.

This was the first week salmon were observed in Black Bear Creek for 2003. A small number of Chum (36) were observed. The beaver ponds in upper and lower Lake Fork were getting low and were no longer spilling into the creek. Juveniles were observed swimming behind the beaver dams. Please see "Figure: Fish Distribution Counts" for distribution of observed adult salmon in the creek during this event.

On August 6, we took photos of Black Bear Creek to document the low flow conditions. Those photos are attached under the tab, August 6 photos.

Summary of Operations at Black Bear Lake Hydro – Summer of 2003

August 8, 2003, 10 a.m. (PST)

The lake is now at -15.08 feet. Those participating were Tom Capiello, ADF&G; Joe Klein, ADF&G; Steve Hoffman, ADF&G; Kevin Brownlee, ADF&G; Steve McCurdy, ADF&G; Mark Voight, USF&WS; Sue Walker, NMFS; and Erik Spillman, USFS; Bob Berreth, BBL Hydro, Inc.; and Glen Martin, AP&T. The question was raised by ADF&G as to why we were not just going to some reduced flow. I explained that we had to have ADF&G's approval, per our license. Erik Spillman offered that all the drainages on the island were suffering and fish were waiting to get into them everywhere. He said he thought we should go to inflows [run-of-river] rather than continue to artificially augment the stream flow while conditions such as this exist. Others agreed but were concerned about stranding the fry emerging from the gravels and rearing there. ADF&G suggested doing some ramping down to where we want to go, which was 6 cfs. The agencies also would like an observer present to observe the effect of flow reduction on the stream below the tailrace, and if dewatering occurs to look for stranded fish.

However, it was easier to go to 5.5 cfs because we had been there before and knew what the set points were. We ramped down at 1 cfs intervals each hour. We had one of our personnel, who was out counting fish that day go back out to observe any dewatering and to check for fish strandings. No strandings were observed, but fry were noted in the beaver ponds that had low water behind them. Flow reduction began at 1:00 p.m. The decrease from 11.5 to 5.5 made a small change in flows during the time observed, 3:30-5:30 p.m. We again informed Alaska Power Company of the need for them to utilize more diesel generation to meet their load. Photos are attached under tab, August 8 photos.

For this date, 69 Chum and 4 Pinks were observed in Black Bear Creek. The beaver ponds were low and no adult fish were observed in them. Creek is low. During the ramping down of flows to 5.5 cfs, at 3:30 p.m., the staff gauge at Lake Fork read 3.96, and Spring Fork staff gauge read 1.56. At 4:30 p.m., the staff gauge at Lake Fork read 3.96, and Spring Fork staff gauge read 1.54. At 5:30 p.m., the staff gauge at Lake Fork read 3.94, and Spring Fork staff gauge read 1.52.

August 11, 2003 E-Mail

“The ramping of the project went well on Friday, ramping down 1 cfs per hour until we reached 5.5 cfs. We had stated we would be going to 6 cfs, but went to 5.5 cfs because we knew how to operate at this level from before, making it easy to set everything up. Even so, by today we had lost another tenth of a foot. We ramped the project down to 4.5 cfs. An observer was present during the last part of the ramping down and as yet I have not received his photo's and field notes, which I apologize for. I should have these things to you tomorrow.”

Rain is in the forecast for Wednesday, Thursday, and Friday. I am more optimistic that there really is rain coming this time. Hopefully relief is near at hand.”

On August 11 the creek level was down less than a tenth of a foot from observations made at 3:30 p.m. Friday, August 8. Photos are attached under tab, August 11 photos. Lake Forks flows changed the least when the project was ramped down on Friday, August 8, and had the appearance of a similar flow on Monday, August 11, with the staff gauge reading 3.90. This leads us to believe that at low flows it is not fed much by the project. Instead, it receives flows from the beaver ponds and off of the hill. Spring Fork

Summary of Operations at Black Bear Lake Hydro – Summer of 2003

staff gauge showed the most change at 1.44. Pools above the upwelling in Spring Fork were observed with a lot of juveniles and their levels had not changed since first observed on August 8. This would be true for this whole low flow period, i.e. month of August. Above the pools in Spring Fork, above 120 meters from its convergence with Lake Fork there were dead juveniles found under rocks. See the attached map under tab, Live and Dead Fry. Observations were made that Spring Forks upwelling appeared to have moved downstream to within about 70 meters of the convergence of both forks.

On August 14, we observed 3 Chum and 33 Pinks in the creek. The confluence of Black Bear Creek into Black Lake was very low. South Fork was extremely low, having mostly ankle deep, still water. Staff level was 0.84. Between South Fork and the confluence of Lake and Spring Forks were many fish carcasses from the bears and wolves. Due to some rain, the beaver ponds were beginning to fill up, but not draining into creek yet. Staff gauge in Spring Fork reads 1.44. Above 120 meters from the confluence with Lake Fork, Spring Fork is now dry with juveniles observed stranded. Lake Fork is extremely low, ankle deep and the staff gauge reads 3.90.

On August 15, we submitted a request to the Commission (e-filing) to allow for a temporary variance from the license by going below the maximum drawdown of -15 feet and below the minimum instream flow requirement for the month of August.

On August 18 we reported to the agencies that the lake had filled to -13.9 feet over that weekend; a 1.5 foot gain in three days. We increased our use of water from 4.5 cfs to 6.8 cfs. On August 22 we reported that the lake level had slowly increased from -13.95 feet on August 18 to -13.57 feet August 22 with a penstock flow of 6.8cfs. We roughly calculated an average inflow that week of about 8 cfs. We raised the flow to 8.6 cfs that morning in an effort to achieve 50% of the required monthly instream flow and expected to operate at that flow until inflow and lake level dictate going to high flows and possibly the minimum flow requirement. At 8.6 cfs the lake rose to about -13.05 feet before starting slowly down over the last several days. This showed us that even at these flows we were still augmenting flows in Black Bear Creek.

On August 22, we observed 424 Chum, 3,189 Pinks, 1 Coho, and 108 Sockeye in Black Bear Creek. The South Fork gauge read 1.28. Beaver ponds in Lake Fork are half full with juvenile fish observed in them. The upwelling in Spring Fork is still at 120 meters above the confluence of Lake and Spring Forks. Lake Forks flows are still very low.

On August 27, 15 Chum, 5,135 Pinks, and 217 Sockeye were observed in Black Bear Creek. Thousands of fish were still noted coming in from the Big Salt. Thousands of fish were observed at the creeks confluence with Black Lake moving in. The confluence is about 40 feet wide by 5-inches deep. There are hundreds of fish carcasses in South Fork from bears. Water levels are low again in South Fork. Water levels are low again in South Fork to Spring/Lake Fork confluence with many fish carcasses from bears. Beaver ponds are getting low again. Our observer was unable to count fish in 60 meters of Spring Fork due to a couple 400+ lb. bears. More fish in creek at one time because of rains last week. Thousands of fish are still pooled up at mouth of drainage at Big Salt waiting to come in.

Summary of Operations at Black Bear Lake Hydro – Summer of 2003

August 28, 2003 E-Mail

“Dear Agency Folks,

We are at the end of August with the drought basically continuing on POW. We did manage to get the lake up to just under -13 feet, but we are slowly going down and are currently at -13.2 feet. We have operated the project at 8.6 cfs since Friday, August 22. Although we would prefer to increase the use of water, which would reduce our use of diesel, we are not comfortable doing this with less than two feet of buffer.

There is no way we can prudently meet the 24 cfs minimum flow requirement for September by September 1, unless there were a dramatic change in weather. We do not know how long these conditions will continue. Although we filed for a variance to the minimum instream flow with the Commission, they are only applying that to the month of August. We will need agency approval to not meet September's minimum flow requirement, and then file another application for variance. We have been increasing the use of water from 4.5 cfs, 6.6 cfs, and then to our current 8.6 cfs. Except for a brief 6-8 hours of maintenance on a diesel generator where we used approximately 16 cfs [which we slowly ramped up and down from], we have stayed at 8.6 cfs. We will increase flows as soon as conditions dictate we can and to also meet the "tenants" criteria of 40% as soon as we can.

Please e-mail your thoughts by tomorrow a.m.”

On August 29, we submitted a request to the Commission (e-filing) to allow for a temporary variance from the license by going below the minimum instream flow requirement for the month of September.

On September 2, we notified the Commission (e-filing) that we were now operating within the terms of our license, above -15 feet and at or above the 24 cfs instream flow requirement for September, and that they could stop the temporary variance application process. Significant precipitation occurred over Memorial Day weekend, which raised the lake level to approximately -9.0 feet, providing an adequate buffer should the drought persist any longer.

September turned out to have more rain than the previous four years on record for Klawock (Ketchikan data not yet available). Rain total at Klawock for September was 13.8-inches (historical data: 2002-10.63; 2001-12.24; 2000-11.93; 1999-10.96).

On September 5, 6,751 Pinks and 213 Sockeye were observed in Black Bear Creek. From the creeks confluence with Black Lake to South Fork the water level is almost normal. Lots of fish carcasses on banks in this section from the bears. Two big bears, observed previously, were in the creek eating fish.

BLACK BEAR LAKE HYDROELECTRIC PROJECT

NO. 10440

ATTACHMENT 'D'

B. Water Quality

Enclosed is a copy of the DEC 401 Certification for this Project. This Project does not impact dissolved oxygen levels because the water from the lake is not drawn from a deep enough elevation to significantly change oxygen content, and is often in the same thermocline as the surface of the lake during the summer. The water discharged from the tailrace also has 800-1000 feet to aerating before reaching the fish habitat. There are no on-going water quality monitoring required of this Project.

BLACK BEAR LAKE HYDROELECTRIC PROJECT

NO. 10440

DEC SECTION 401 CERTIFICATION

STATE OF ALASKA

WALTER J. HICKEL, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION

FOR YOUR RECORD & INFO

SOUTHEAST REGIONAL OFFICE
410 Willoughby Avenue, Suite 105
Juneau, AK 99801-1795

PHONE: (907) 465-5350
FAX: 465-5362

Post-It™ brand fax transmittal memo 7671 # of pages 5

To <i>VERN</i>	From <i>JOHN</i>
Co.	Co.
Dept.	Phone #
Fax #	Fax #

10 November 1992

NOV 20 1992

Mr. Robert Grimm, President
Alaska Power and Telephone Company
P.O. Box 222
Port Townsend, WA 98368

CERTIFIED MAIL RETURN
RECEIPT REQUESTED
#P-532 466 207

Re: FERC/Project No. 10440

AK920505-03J

In accordance with Section 401 of the Clean Water Act of 1977 and provisions of the Alaska Water Quality Standards, the Department of Environmental Conservation has issued the enclosed Certificate of Reasonable Assurance for the proposed Black Bear Lake hydroelectric project.

Department of Environmental Conservation regulations provide that any person who disagrees with this decision may request an adjudicatory hearing by filing a statement of issues under 18 AAC 15.200-310. The hearing request should be mailed or hand delivered to the Commissioner of the Alaska Department of Environmental Conservation, 410 Willoughby Avenue, Suite 105, Juneau, Alaska 99801-1795. Failure to submit a hearing request within thirty (30) days of receipt of this letter constitutes a waiver of your right to judicial review of this decision.

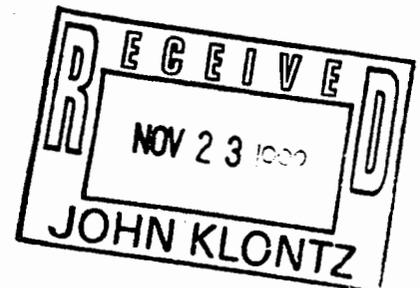
Sincerely,



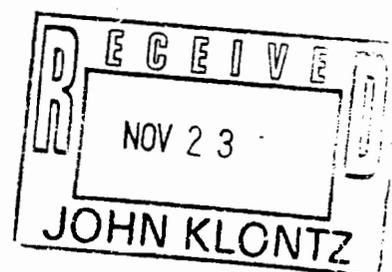
Dick Stokes
Regional Environmental Supervisor

Enclosure

cc: Joe Davis, FERC, Washington DC
Susan Cantor, EPA, Anchorage
Lorraine Marshall, ADGC, Juneau
Beth Kerttula, ADOL, Juneau
Jim Durst, ADF&G, Juneau
Steven Pennoyer, NMFS, Juneau
Nevin Holmberg, USFWS



ADEC, SERO, Juneau
ADEC, Ketchikan District Office
Elizaveta Shadura, ADNR, Juneau
Marilyn Westfall, City of Klawock
Jon Bolling, City of Craig
Bob Loescher, Sealaska Corp.
Corrine Garza, Klawock/Heenya Corporation



STATE OF ALASKA

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

CERTIFICATE OF REASONABLE ASSURANCE

A Certificate of Reasonable Assurance, as required by Section 401 of the Clean Water Act, has been requested by the Alaska Power and Telephone Company, P.O. Box 222, Port Townsend, WA 98368 for the proposed hydroelectric project to generate renewable power for use on Prince of Wales Island replacing existing diesel powered electric generation facilities on the island. The project lies within several land management jurisdictions. Black Bear Lake, the intake, a small portion of penstock and part of the transmission line are on U.S. Forest Service lands. The lower portion of the penstock, powerhouse, access road, and majority of the transmission line are on lands owned by Sealaska Corporation. The remainder of the transmission line is on Klawock/Heenya Corporation and City of Klawock lands.

Black Bear Lake discharges through a notch cut in the bedrock rim at the lower end of the lake and drops 1,400 feet over a series of falls to form Black Bear Creek. These falls bar any upstream fish migration. At low flows, the creek infiltrates into the coarse alluvial deposits of Black Bear Creek valley at a point about .6 of a mile below the outlet of Black Bear Lake and at approximately 1,000 feet downstream, reemerges at several upwelling areas (Lake Fork). Other upwellings exist from natural springs (Spring Fork) which contribute to the flow of Black Bear Creek. Black Bear Lake supports a self-sustaining population of rainbow trout, and Black Bear Creek is cataloged as an anadromous fish stream. The provision of increased flows to Black Bear Creek during the summer low flow period will be a benefit from the project.

Project Description:

The project will utilize natural run-of-river flows into Black Bear Lake as well as the upper 15 feet of Black Bear Lake. The net storage capacity of the reservoir will be siphoned down 15 feet from elevation 1,687 to a minimum elevation of 1,672. A siphon intake will extend approximately 150 feet into Black Bear Lake from the shoreline near the lake outlet. Three helicopter landing areas (a total of 5 for the project), which will be cleared of trees, are anticipated in the vicinity of the intake.

The intake will convey water from the lake to a 30-inch penstock which will extend approximately a distance of 4,900 feet to the powerhouse in three sections: (1) The first section of the penstock (820 feet), which includes a siphon and flow bypass, will be buried or bermed over. Burial involves excavation 87 feet deep in muskeg organic soil. After the pipe exits the lake, the penstock raises slightly. A vacuum pump and valve will be located at the high point of the pipeline, at elevation 1,695, to prime the siphon to fill the penstock with water. A valve vault will be located 400 feet downstream of the vacuum pump, to allow controlled operation of the siphon. A bypass pipe will be located

upstream of the valve vault, to divert flow from the siphon intake to Black Bear Creek above the falls to ensure continued flows into the creek when the lake level is below the natural spillway crest. (2) The second section (1,930 feet) emerges below the valve vault and will be supported on concrete piers which will be founded in the near surface rock and saddles down gradual slopes and two steep rock cliffs. The pipe will be restrained to the piers and anchored by thrust blocks as required to resist thermal, gravitational, hydrostatic and dynamic forces. (3) The third section (2,150 feet) will be buried beginning at the lower steep slope area and connects to the powerhouse. At the time of project startup, a significant amount of water will spill from the lake; when the project reaches capacity, very little water will spill over the falls.

The powerhouse will be located adjacent to Black Bear Creek and will contain two turbines and synchronous generators for a total installed capacity of 4.5 MW. A tailrace channel will transport the turbine discharge 100 feet to a tailrace apron which will distribute the flow to the creek. The tailrace includes infiltration galleries, from which the inflow will aid in recharging subterranean water which resurfaces at the upwelling areas. A switchyard will be located adjacent to the powerhouse. A pole-mounted transmission line will begin at the switchyard and follow an existing logging road for a distance of five miles to the State highway and then turn southwest for about nine miles to the Klawock substation.

Access to the project will be by approximately four miles of improved existing logging roads from the State Highway and construction of a new road at the end of the existing northside Black Lake logging road to connect to the powerhouse site. During construction, the existing southside logging road will be used as additional site access. A temporary tram will be installed to transport material to the upper slope and intake area during construction. It will be partially dismantled after construction, with foundations and supports left in place for future maintenance.

In addition, the project description includes mitigation measures identified in the FERC application (pages E-18/19, E-49, E-65/67, and Appendix 6). The measures include monitoring for water quality and fish populations as well as practices to minimize impacts. Concerning water quality, the erosion and sediment control plan (ESCP), appendix 6, contains detailed site-specific measures for erosion and sedimentation as well as APT's adoption of general practices (standards and guidelines, best management practices) used by other government agencies, such as U.S. Environmental Protection Agency, U.S. Forest Service, and Alaska Department of Natural Resources forest practice guidelines. The mitigation measures address such things as drainage, settling ponds, straw bale barriers, silt fences, jute netting, revegetation, handling of soils, etc. APT proposes to perform water quality monitoring during and after construction, in the same manner as the pre-project program and at the previously sampled locations for comparison. Concerning fish, the mitigation measure address such things as culverts with sediment trap outlets, tailrace infiltration galleries, intake design, etc. In addition, APT states they will conduct monitoring of fish populations, and they will coordinate with DFG on the pre-

and post-project fish monitoring studies. All of the mitigation measures are part of the proposal and are included in considerations upon which the State has developed its decision.

The proposed activity is located approximately nine miles northeast of Klawock on Prince of Wales Island, Sections 12 and 13, R. 82 E., T. 73 S., and R. 83 E., T. 73 S., Copper River Meridian.

Public notice of the application for this certification has been made in accordance with 18 AAC 15.180.

Water Quality Certification is required for the proposed activity because the activity will be authorized by the Federal Energy Regulatory Commission, Project No.10440, and a discharge may result from the proposed activity.

Having reviewed the application and comments received in response to the public notice, the Alaska Department of Environmental Conservation certifies that there is reasonable assurance that the proposed activity, as well as any discharge which may result, is in compliance with the requirements of Section 401 of the Clean Water Act which includes the Alaska Water Quality Standards, 18 AAC 70, and the Standards of the Alaska Coastal Management Program, 6 AAC 80. The stipulations were developed during the interagency project review by the Departments of Environmental Conservation, Fish and Game and Natural Resources and coordinated according to 6 AAC 50. They are necessary to ensure the project is consistent with the standards of the Alaska Coastal Management Program 6 AAC 80.040-150.

1. Any significant impacts in water quality shall be immediately reported to DEC and DFG within 24 hours of discovery.
2. The fisheries and water quality monitoring activities and findings shall be continued both during construction and for at least five years following the completion of this project, and the findings shall be documented and reported to DFG and DEC on an annual basis. If after five years of project implementation, it appears there are still unresolved fisheries or water quality concerns, then monitoring shall continue. The monitoring program may end when it has been determined to the satisfaction of DFG and DEC that no correction action will be necessary as a result of this project.
3. The project shall be configured so as to not interfere with Alaska's ability to explore and develop the breccia mineralized areas at the project site.

11/10/92

Date



Dick Stokes

Regional Environmental Supervisor