

**MINUTES OF FISHERIES SUBGROUP MEETING  
TAKATZ LAKE HYDROELECTRIC PROJECT, FERC No. 13234**

**Thursday, May 13, 2010**

**City and Borough of Sitka Electric Department (“City”)**

The meeting was held in the National Marine Fisheries Service (NMFS) conference room in the Juneau federal building, and began at about 9:10 am.

In attendance were:

Sue Walker, National Marine Fisheries Service (NMFS)  
Shawn Johnson, Alaska Department of Fish and Game (ADF&G)  
Kate Kanouse, ADF&G  
Eric Rothwell, NMFS  
Karl Wolfe, City fisheries consultant  
Christopher Brewton, City Electric Department Utility Director  
Mike Prewitt, City FERC licensing consultant  
Roger Harding, ADF&G

Attending via teleconference were:

Perry Edwards, US Forest Service (USFS), Sitka  
Patrick Fowler, ADF&G, Sitka

After introductions, Mike began by saying that the meeting’s purpose was to add detail to the City’s Draft Fisheries Study Plan. Mike said that the comments had raised specific questions, and also noted that the final plan would require more detail than the draft.

Mike said the plan and discussions in the meeting were focused on work to be done in the Takatz Lake basin in 2010, noting that little existing information on aquatic resources in this basin. Mike added that the proposed project would have an unavoidable effect on Takatz Lake, also suggesting early emphasis. The group agreed on this emphasis.

Mike said that the City wished to discuss allocations of Karl’s (and his assistants’) efforts relative to the many water potentially-affected basins including Takatz, Baranof, Medvejie and the smaller waters which might be affected by the City’s Overland Transmission Alternative.

There was some discussion about the two transmission alternatives. Chris said that the City had essentially eliminated the Marine Alternative because of cost, engineering feasibility and effects on the community of Baranof Warm Springs. He said that the City

was working with FERC to find a way to go forward with only the Overland transmission alternative.

### **Takatz Lake**

It was generally agreed that Takatz Lake would not be ice-free before mid June. Karl described recent flights over the lake and said that snow pack, while less than in previous years, was still considerable and that the lake was fully frozen over.

There was some discussion about the term “abundance” as used in the draft study plan. It was agreed that this term, in relation to the 2010 studies, would mean “relative” abundance and would not denote a mark-recapture population estimate.

Karl said that he would try to visit the lake this year prior to glacial runoff to facilitate initial snorkel observations when the water was clear. Along with snorkel efforts, baited hoop and minnow traps would be set in the lake, the major inflow tributary (called “Upper Takatz Creek” in the draft study plan) and in smaller inflow tributaries. He added that trapping would likely increase in importance as water clarity decreased. The use of variable mesh gill nets was also briefly discussed.

There was also discussion of a bathymetric survey. It was generally agreed that this was a good idea from both an environmental and engineering standpoint. It was agreed that the survey could be done using a depth finder and GPS.

Mike suggested creating a smaller workgroup consisting of Karl, Patrick Fowler, Troy Tydingco, and Roger Harding that would be able to communicate closely and quickly adapt study strategies and objectives as more information was gathered about the drainage. Richard agreed, and said that it would be important for Karl to keep the remaining agency and other reviewers apprised of progress through frequent trip reports and study plan updates.

### **Lower Takatz Creek**

Shawn asked about anadromous fish in Lower Takatz Creek (downstream of the lake outlet). Karl said that there were two potential barriers to upstream fish passage, one just above high tide line, and the other about 1.5 miles upstream. Karl said he had preliminarily broken the stream into three reaches with Reach 1 extending to the lower potential barrier, Reach 2 extending to the upper barrier, and Reach 3 being the long stretch of cascades and falls leading upstream to the lake outlet. Karl said that the upper barrier was a certain passage impediment, but that the City would do a Powers and Orsborne fish passage analysis of the lower barrier.

Shawn asked about the ongoing stream gaging effort with USGS. Karl said that a gage near the lake outlet had been installed by USGS last year. Chris said that the City had reached agreement with USGS on a gage on lower Takatz Creek. There was short discussion about whether the lower stream gage had been installed by the USGS in

vicinity of an earlier USGS gage. (It was found out after the meeting that it had been installed on April 9<sup>th</sup>). Shawn said that there was a fifteen to twenty year record on the old stream gage. He added that with gages at both the lake outlet and near tidewater, accretion flow could be determined through proportionation.

Also briefly discussed was drainage entering Lower Takatz Creek from the north in Reach 2. Karl said he planned to look at this as well as another smaller drainage entering lower down in the creek just above the lower barrier.

Kate and Karl discussed the Anadromous Fish Catalogue which shows pink, chum, coho up to a point below the upper barrier and lower lake. It was agreed that this was likely a blanket designation as Kate said that she had found no supporting evidence in the fish and game database. Discussion continued about the likelihood of chum salmon from nearby net pen rearing operations as well as anecdotal information of pink salmon below the lower potential barrier.

There was some discussion of the effects of tides. Karl stated that it appeared that tidewater goes all the way to the base of the first “barrier” (It has since been determined that tidewater reaches the base of the first falls only on the highest tides. The USGS gauge has been placed above this area). There is a considerable length of flow at low tide.

Karl said he would do focused trapping, stream walks, and snorkeling when visibility was good in Reach 2. He said that there was a large side pool off the channel in Reach 1 which he would observe during the salmon runs to help determine run timing, but that he would like to keep his options open and possibly try some aerial surveys as fish darkened to determine escapement.

There was some discussion of “unnamed drainage”. Karl said it was an unlisted creek but he would do a stream walk in this area during the pink and chum runs since due to the size, length, and channel type it unlikely contained anything else.

### **Sadie Lake**

Karl and Roger said that the Baranof Lodge owner had related that there were cutthroat in Sadie Lake. Karl said that he had heard of them in the outlet stream but that he didn't know if they spawned successfully in the lake. Karl said he would go once or twice to the lake this summer and snorkel in the inlet streams and outlet stream areas which appeared to contain spawning habitat.

Roger said that it would be possible to compare fish densities with those in Baranof Lake if the methods were the same. Karl said he would work with Roger on these comparisons. Karl also said that if he had time he would snorkel the inlet and outlet areas and look for likely spawning and rearing areas. It was agreed that Sadie Lake was not a high priority this summer.

## **Baranof Lake and Upper Baranof River**

Karl said that 2010 Baranof Lake and River studies would concentrate on temperature monitoring. Roger and Karl discussed the highly variable water temperature regimes near certain tributaries. They said that groundwater or thermal inflow might be an issue relative to placement of the transmission line, with regard to rearing and spawning fish. Karl added that, in addition to the temperature monitoring work, he would continue to observe fish utilization in the upper end of the lake, and to document fish use near the extensive beaver ponds in that area.

Roger noted an area near the Upper Baranof River confluence with the lake where the proposed transmission-line route would transition from submarine to above ground. He said that this is an area where cutthroat congregate in large numbers. Karl said that it was likely an important spawn-staging and rearing area.

There was a short discussion about bathymetry, particularly along the proposed submarine portion of the t-line. Karl noted an NSRAA bathymetric map and Mike said that bathymetry would eventually be necessary to evaluate the underwater transmission route.

## **Medvejie River and Lake**

Karl said that the river upstream of the hatchery was weir controlled and that salmon, primarily chums, began pushing against the weir around July 15<sup>th</sup>. He also stated that NSRAA ensures that there are enough chums that make it through the weir to populate the stream, and NSRAA produces pinks to meet escapement requirements.

Karl briefly discussed the known presence of Dolly Varden juveniles in the stream below the lake. He also stated that he has heard evidence both ways for presence or absence in the Lake, but it is generally concurred that there are no fish in Medvejie Lake.

Karl said that stream flow above the hatchery is highly variable, depending on rain and lake levels. He also said that the anadromous fish catalogue indicates that the upstream limit of anadromous fish distribution is a series of short cascades just below the lake outlet.

Karl said that he could set some traps in the lake in the fall to document whether there were Dolly Varden present or possibly overwintering. It was agreed that work in the Medvejie drainage was not a high priority in 2010 and that spawning surveys in the stream would focus on Dolly Varden, and that they would be done at times when weather made access to other areas impossible.

Mike proposed that study planning proceed in two steps: 1, meeting minutes, documenting discussions and agreements and 2) finalization of the study plan after a field trip after ice goes out.

The meeting adjourned at about 11:00 am.