

## **DRAFT MINUTES**

### **April 15 Instream Flow Teleconference**

#### **Blue Lake Hydroelectric Project, FERC No. 2230**

The teleconference began at about 10:00 am. In attendance on the Teleconference were:

**Kevin Brownlee/Shawn Johnson**, Alaska Department of Fish and Game (ADF&G), Juneau;  
**Dean Orbison, Charlie Walls**, City and Borough of Sitka Electric Department (“City”), Sitka;  
**Katharine Miller**, National Marine Fisheries Service (NMFS), Juneau;  
**Margaret Bielharz**, US Forest Service (USFS); Oregon;  
**Ken Coffin, Marty Becker**, USFS, Sitka;  
**Jon Ptacek**, Miller Ecological Consultants, Ft. Collins, CO;  
**Richard Enriquez**, US Fish and Wildlife Service (FWS), Juneau;  
**Karl Wolfe**, City fisheries study contractor, Sitka;  
**Mike Prewitt**, City relicensing consultant, Seattle.

Each participant was introduced.

Dean said that he would be retiring in May and that Charlie Walls, the Utility Director would take over as the relicensing lead for the City.

Mike then introduced Jon Ptacek of Miller Ecological Consultants. He said Jon was brought on to assist the City with the field and computer aspects of the hydraulic measurement and habitat modeling.

Mike described the purpose of the meeting. He said that the meeting was in response to comments, received via e-mails from Jim Ferguson and Katharine Miller. He said the subject e-mails had been distributed to all conference attendees and that their concerns were listed as the topics of the Supplement to Instream Flow Study Plan distributed on 4/12/04 by the City.

Mike added that, in addition to the topics in the Supplement, details of the hydraulic measurements had been discussed in a teleconference held on March 25, 2004 with Joe Klein of ADF&G to discuss equipment and other details of the field measurements. Mike said that the City had distributed draft minutes of that meeting.

Mike moved on to the equipment to be used. He asked Jon to described the Swoffer current meter which has a direct readout and provides minimum, maximum and average readings of the velocities in a shorter time than that necessary for the Price AA, which had been suggested by ADF&G during the March 25 teleconference.

Jon said that the USGS had recommended using a direct readout when using the Price AA because of the operator error often associated with counting clicks. He said that there had been some concerns about the Swoffer performance in slow or shallow water because of propeller inertia, but that those concerns had been addressed through use of a larger diameter propeller.

Kevin mentioned that the Swoffer had been used on the Ward Creek Project in Alaska and that the Swoffer had been calibrated against the Price AA. He said that the Swoffer should be calibrated against the Price AA in the field prior to agency approval or use. Kevin said we should check with Joe Klein about the use of the Swoffer.

Mike said that we would have both meters in the field next week, and that we could field check the agreement of the meters, in the presence of the group.

Mike then said that the Techniques paper had initially described surveying measurements to an accuracy of 0.1 foot, which had been changed to 0.01 foot in the final version. He said that we would measure Water Surface Elevations to 0.01 ft, and bed elevations to 0.1 ft. He added that we would measure the water surface elevations, then subtract the depths, as measured to 0.1 ft using the top-set rod, from the WSE's to get bed elevations. There was no opposition to this proposal.

Mike said that we would measure two flows next week, first a high flow in the 120 cfs range and then a low flow of about 50 cfs. Mike said that both flows might be affected by large rainstorms which would increase the flows in a downstream direction. He said that if rain prevented measurement of a low flow, we could extrapolate low-flow velocities given measured velocities and channel configurations from the high flow data set.

A question was asked about the flow range within which velocity predictions could be extrapolated. Mike said that it was quite variable and depended on channel configuration and particle size, but that the rule of thumb was 0.5 times the lowest flow and 2.5 times the highest flow measured. Jon agreed that there was a lot of variation and that it wouldn't be known until after the measurements and calibrations.

Mike introduced the topic of substrate by saying that we would be measuring substrate prior to fully developing the substrate component for the various HSI curves. Shawn asked if we would be developing site-specific curves.

Mike said that we would review literature Joe Klein provided and verify it using observations or simulations from the Sawmill Creek steelhead and coho spawning areas, to the extent possible.

Mike said that the hydraulic cross-sections would be placed directly on the very limited areas over which steelhead and coho have been observed spawning through the period of Karl's surveys.

Note: The discussion at this point may have proceeded on the understanding that we have proposed site-specific curve development based on measurement of habitat parameters at the fish locations. In fact, we have not proposed to do site-specific HSI curves; our proposal has been to utilize the information available from the consistent use of specific limited areas to confirm literature based curves. Since we are reluctant to disturb spawning fish while actually on their redds, we have proposed measuring velocities and depths at the redd locations prior to spawning and modeling those parameter values at flows at which fish were seen to spawn. Depths and velocities at the redds will be considered as preferred.

It was noted that since we have not observed rearing, the City will use published curves for rearing.

On the substrate topic, Kevin encourage measurement and coding of substrate and cover to the highest level of detail possible because it is easier to narrow the data down than to add it if it hasn't been measured. Mike agreed.

Shawn asked if substrate evaluation would be done visually or with some sort of measurement. Mike said that the City had used a template during the US Forest Service Tier III habitat measurement earlier this year and that it might be used again. John said that visual evaluation was typical in most PHABSIM applications in his experience.

Shawn returned to the current meter discussion and asked how the Swoffer performed in shallow water where a Price pygmy meter would normally be used. Jon said that the Swoffer worked in water down to about 0.4 feet and couldn't speak to it's performance in lesser depths. Dean said that, generally, there was little shallow water in the areas we'd be measuring, but that there would be exceptions. Mike said that in his experience, the USGS had had trouble with the Pygmy meter as well.

Mike said that the group could now go through the Supplement, Section by Section to address remaining questions. Mike said that teleconference participants could comment on the Supplement at the conference or, preferably, in writing, afterward.

Mike described the Instream Flow Study Objectives as generally to develop Q. vs. Habitat relationships for steelhead and coho and primary species and others as desired. There were no comments on the Objectives.

Regarding the timetable, Mike went through the proposed schedule noting study planning, field work, reporting, reservoir modeling and instream flow negotiations. There were no comments on the schedule. He said that the City's objective in instream flow study planning was to prepare a final instream flow study plan by mid-summer. He noted that that seemed out of order, with field work coming up next week, but that, through individual documents, meetings and teleconferences and interagency participation in field work, all components of the study have been open to review and comment.

Mike said the methods and equipment had been discussed in the minutes of the 3/25/04 teleconferences, which was out for review, furthered by the discussions of the current meter options and surveying accuracy during this teleconference.

Kevin asked about photo documentation. Mike said that all cross-sections would be digitally photographed, preferably with the tape or tagline installed. He said that, at some point in time, it would be valuable to conduct a video survey of the stream. Dean said the City had a video camera and that it might be made available.

On the topic of study sites, Mike mentioned that Katharine had asked in her e-mails about the rationale for measuring a subset of all spawning areas. Mike directed the group to the reach maps in the Supplement, and discussed the City's rationale for doing measurements at three locations below the falls and two above. Katharine said she understood the rationale and generally agreed with it. There were no other disagreements with the cross-section selection rationale.

Kevin added a cautionary note about the use of only the observed spawning habitats. He asked if we were confident that we would be representing the full range of spawning habitat given that the locations where fish spawn is a function of run strength and habitat availability which is a function of flow. He said that, with different escapements and different flows during the spawning periods, habitat utilization might differ.

Mike agreed, and added that, during the two- and three-year observation periods for steelhead and coho, respectively, Karl had observed fish use of the same limited areas during runs of differing strengths and at different flows during the spawning period, particularly for coho. He added that the steelhead spawning was normally during a low-flow period prior to the fall spill.

Regarding Products Produced, Mike said that the City would produce an Instream Flow Data Report following next week's field measurements, and then a calibration report, for agency review prior to beginning work on the Q vs. Habitat relationships. He added that the City would also consolidate the existing Instream Flow study planning material into a single Instream Flow study plan.

Dean reminded the group to submit comments on the Blue Lake reservoir operation model description which the City had distributed earlier. He said that the model would be ready in time to use it in instream flow evaluations and negotiations.

Mike reminded the group of the site selection field trip scheduled for Tuesday, April 20, and added that attendees were all welcome to observe the field measurements on Wednesday, Thursday and Friday.

The teleconference convened at about 11:00 am.