

June 8, 2004

**Re: Cooper Lake Hydroelectric Project (FERC No. 2170):  
Response to Comments on Draft 2003 Reports**

Dear Cooper Lake Project Relicensing Participants:

Chugach Electric Association, Inc. (Chugach) appreciates the efforts of all those who reviewed the draft reports for the 2003 studies related to the relicensing of the Cooper Lake Project (Project). We received comments from several relicensing participants on the draft reports, which were issued in March 2004. The comments conveyed a number of general themes, along with specific technical and editorial comments on individual reports.

The purpose of this letter is to respond to the general themes noted within the comments on the draft reports. These included requests for evaluation of conditions that would occur with a “static” reservoir or under operations at a higher maximum reservoir level, comments regarding integration of results from related studies, comments regarding mitigation measures, and requests for additional studies.

This letter is not intended to address study-specific technical or editorial comments. Where possible and appropriate, the reports are being modified to address these comments, by adding further explanation or clarification, for example. Other comments will be addressed through separate explanation, not directly incorporated into the report text. All comments and responses specific to each report will be summarized in tabular form and appended to the final report.

**“Static” Reservoir Level**

Some of the comments<sup>1</sup> noted that the draft reports did not address past requests from relicensing participants that Chugach evaluate the effect of the Project reservoir by modeling or otherwise assessing conditions that would exist with a “static” (i.e., naturally fluctuating) reservoir. A few of these specifically requested that the evaluation be made assuming a static reservoir elevation of 1,168 feet above mean sea level (msl), the approximate lake level prior to construction of the dam. Resources of interest mentioned in these comments included vegetation, wildlife habitat, fish, and macroinvertebrates.

Chugach notes that all of the studies were conducted consistent with the final study plans and believes the reports do fully describe the ongoing effect of reservoir operations on the resources of interest. Chugach has also summarized in the Initial Consultation Package<sup>2</sup> and Draft License Application<sup>3</sup> all historical information of which it is aware, to qualitatively describe pre-Project

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<sup>1</sup> Comments included in the USDA Forest Service (USFS) letter dated April 30, 2004, and in the Fish for Cooper Creek Coalition / Alaska Center for the Environment (FCCC/ACE) letter dated April 29, 2004.

<sup>2</sup> Issued June 2002.

<sup>3</sup> Issued May 26, 2004.

conditions. Nevertheless, to address the continuing interest from participants, Chugach will, where possible, include in the applicable final reports additional discussion using data collected during the 2003 studies to describe conditions that would likely exist if the reservoir level were held “static” at about 1,168 feet msl.

### **Analysis of Effects of Different Reservoir Operating Scenarios**

Commenters<sup>4</sup> pointed out that the draft reports did not respond to original study requests that Chugach evaluate the potential future effect of operating the reservoir over a greater range of fluctuation, up to elevation 1,206 feet msl, as compared to the existing operating range, in which the maximum normal operating elevation is 1,194 feet msl. As explained in the draft reports, because Chugach no longer proposes any change in the existing operating regime of Cooper Lake, the studies did not analyze potential effects of alternative operations. However, the necessary data to analyze the potential effects of an operating range up to 1,206 feet msl were collected as described in the study plans. Although no detailed analysis of these data will be conducted at this time, the final reports will be modified to include a brief, qualitative description of how an increased normal reservoir operating level could have been expected to affect vegetation, fish, and wildlife resources.

Some concern was also expressed that the new license will continue to allow reservoir operations up to the existing spillway elevation of 1,210 feet msl, regardless of Chugach’s intent to continue existing operations. Chugach anticipates that the new FERC license will formally establish the operating regime for the new license term consistent with the operating proposal in the license application.

### **Integration of Results from Related Studies**

Other comments<sup>5</sup> questioned why the draft reports did not include an integrated analysis of results from related studies, and suggested that without a more comprehensive analysis, there is not a complete picture of the effect of the Project. For example, it was noted that in the draft report for the Cooper Creek Fish Resources Study, the results from the water temperature data collection or temperature modeling results conducted for separate studies were not factored into the analysis of fish abundance and distribution in Cooper Creek.

The objective of the 2003 studies was to characterize existing conditions and evaluate ongoing and potential future effects of the Project. For some resources, including Cooper Creek fish resources, several related studies were conducted to allow a full analysis of Project effects. However, each individual study focused only on a particular aspect or aspects, in accordance with the final study plans. It would be unwieldy and not useful to present a comprehensive analysis within each separate report. A broader analysis of Project effects is presented in the Draft License Application, and is based on a synthesis of the results from related studies.

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<sup>4</sup> USFS letter dated April 30, 2004; Alaska Department of Fish and Game (ADFG) letter dated April 30, 2004.

<sup>5</sup> ADFG letter dated April 30, 2004; FCCC/ACE letter dated April 29, 2004.

## **Mitigation Measures**

Some of the comments requested that the final reports identify or evaluate potential mitigation measures to address Project effects. Identification of mitigation measures, however, is outside the scope of the relicensing studies, as defined in the final study plans. As with the comprehensive Project effects analysis described above, identification and analysis of potential mitigation measures are included in the Draft License Application, not in the study reports.

In one comment letter,<sup>6</sup> Chugach was requested to replace the culvert on the Porcupine Creek crossing of the powerhouse access road (as discussed in the draft Porcupine Creek Fish Resources Study report) as soon as possible, instead of waiting until the new license term. At this time Chugach does not anticipate implementing any mitigation measures prior to receiving the new FERC license. However, Chugach does expect that the Porcupine Creek culvert replacement (or channel modification), if included in the final mitigation proposal and approved by FERC, would be implemented relatively quickly upon receipt of the new license.

## **Requests for Additional Studies**

Among the comments on the draft reports were a few requests for additional study efforts. As a general response, Chugach believes it is not in the interest of the parties or the relicensing process as a whole to undertake significant new data collection beyond that already planned for 2004. The relicensing studies program was designed to generate sufficient information to support the analysis of Project effects for the purposes of filing the FERC license application. While further study might provide a more detailed level of scientific insight in some cases, it would be very unlikely to alter the overall conclusions regarding the nature and extent of Project impacts. This being the case, Chugach believes that the results of the 2003 studies, together with the information being collected in 2004, should be sufficient for determining what mitigation measures are appropriate given the conclusions reached regarding Project effects. Moreover, the time remaining before the final license application must be filed (no later than April 30, 2005) is relatively short, and Chugach feels it is critical to use this remaining time as effectively as possible to work toward completion of those study efforts already underway and development of the final licensing proposal. To the extent more detailed information may be needed for final design of mitigation measures, that information can be developed in consultation with the appropriate agencies and other participants after the issuance of the new license.

Specific requests for additional studies included a request for collection of core samples from the sediments of Cooper Lake.<sup>7</sup> The stated intent of the requested study would be to evaluate the potential historical role of marine nutrients in the lake as a means of determining whether anadromous fish ever had access to the lake in the past. Reintroducing salmon into Cooper Lake was suggested as a potential mitigation measure if it were proven through the sediment core analysis that salmon were present in the lake in the pre-Project era. It was also suggested that the core sampling could provide data on pre-dam productivity of the lake (due to the possible input of marine nutrients from anadromous fish) and, thus, the possible loss of nutrient outflow to Cooper Creek. Chugach does not believe such an analysis is justified, nor would it benefit the relicensing process. The falls upstream of Stetson Creek drop a total of 161 vertical feet over a

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<sup>6</sup> FCCC/ACE letter dated April 29, 2004.

<sup>7</sup> FCCC/ACE letter dated April 29, 2004.

horizontal distance of 1/3 mile, and include several 15- to 78-foot waterfalls impassable to fish. Inference from the geologic and geomorphic setting would suggest these features have been barriers to fish passage into Cooper Lake for millennia.

Another request for a new data collection effort was a request for a paired stream analysis, comparing the lower portion (Alluvial Reach) of Cooper Creek with the lower approximately half-mile of both Juneau and Crescent creeks.<sup>8</sup> The paired stream analysis would be aimed at documenting habitat conditions and fish presence in the two comparison streams to identify habitat factors that might allow Cooper Creek to support early-run chinook salmon. The impetus for the request apparently is concern that the Cooper Creek Instream Flow Study will only be able to evaluate flow and temperature limitations on fish habitat suitability in Cooper Creek, but will not be capable of adequately evaluating other physical habitat factors. However, Chugach is confident that the instream flow study — including the recent selection of habitat suitability criteria by researchers and agency fish biologists on the collaborative review team — will be sufficient to allow a robust assessment of Project impacts and evaluation of potential outcomes of various mitigation scenarios. Further, as explained in earlier correspondence during development of the relicensing studies program, Chugach remains wary of any efforts to try to draw conclusions based on comparisons of Cooper Creek to nearby streams, because there are significant differences between Cooper Creek and the suggested comparison streams that have been noted that would limit or call into question the utility of the information.

Chugach was also requested to evaluate the desirability of Cooper Lake macroinvertebrates as a food source for Arctic char, rainbow trout, and water birds.<sup>9</sup> This would be a reasonable analysis to conduct if such information were widely available in the literature; but this is not the case. Therefore, addressing this question would require field-based evaluation of fish feeding preferences from other lake systems in Alaska, which is well beyond the scope of the relicensing analysis. In addition, Chugach sees no critical data gaps that exist without this information. Food sources in Cooper Lake are evidently adequate to support the relatively abundant populations of Arctic char and rainbow trout that have been documented in the reservoir, as well as the numerous water birds that nest there.

In summary, Chugach does not believe the requested new studies would significantly inform the relicensing analysis, and therefore would primarily result in diverting limited time and resources away from the more critical task of completing the Project effects analysis and developing the final licensing proposal.

Again, we thank you for your efforts and contributions in reviewing the draft 2003 reports. Individual study reports will be distributed as they are finalized. Most of the reports are expected to be finalized within the next few weeks, while reports requiring further analysis or incorporation of 2004 results will be distributed later in the summer. Target finalization dates for the reports are shown on the attached table.

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<sup>8</sup> Hydropower Reform Coalition letter dated May 24, 2004.

<sup>9</sup> USFS letter dated April 30, 2004.

If you have any questions, please do not hesitate to call.

Sincerely,

CHUGACH ELECTRIC ASSOCIATION, INC.

A handwritten signature in black ink, appearing to read "Burke Wick". The signature is written in a cursive, flowing style.

Burke Wick, PE  
Plant O&M Supervisor  
Cooper Lake Relicensing Project Manager

Enclosure

<b>Report</b>	<b>Target Finalization Date</b>	<b>Notes</b>
Streamflow and Water Quality Study	6/15/04	
Cooper Creek Aquatic Habitat Analysis	6/15/04	
Cooper Creek Fish Resources Study	7/15/04	Foot surveys to be continued in 2004
Cooper Creek Temperature Model technical memo	6/15/04	
Cooper Creek Sediment and Geomorphology Investigation	6/30/04	
Cooper Lake Fish Resources Study	7/15/04	Studies continuing in 2004
Cooper Lake Macroinvertebrates Study	6/30/04	
Preliminary Evaluation of Entrainment in Cooper Lake	6/15/04	
Porcupine Creek Fish Resources Study	6/30/04	
Evaluation of False Attraction of Fish to the Project Powerhouse Outfall	6/15/04	
Evaluation of Effects of Project Operation on Kenai River Fish Habitat	7/15/04	
Terrestrial Vegetation Study	6/30/04	
Sensitive Plants Survey	6/30/04	Additional surveys to be conducted in 2004
Exotic Plants Study	6/30/04	
Wetlands Study	6/15/04	
Terrestrial Wildlife Study	7/15/04	
Cooper Lake and Cooper Creek Water Birds Study	6/30/04	
Recreation Study	8/31/04	Revised draft to be issued, including new results from Winter Survey
Visual Impact Analysis	7/15/04	
Cooper Creek Recreational Whitewater Potential, Preliminary Evaluation	6/15/04	

<b>Report</b>	<b>Target Finalization Date</b>	<b>Notes</b>
Road and Access Route Condition Survey	7/15/04	Surveys continuing in 2004
Cultural Resources Study: 2003 Inventory and Assessment of Archeological And Historical Resources	7/15/04	Surveys continuing in 2004
Cultural Resources Study, Determination of Eligibility for National Register of Historic Places Listing, Hydroelectric Facilities	7/15/04	