

Rocky Reach Meeting Minutes

To: Distribution List
From: Scott Kreiter/Steve Lachowicz
Date: July 27, 2000
Subject: Rocky Reach Natural Sciences Issues
Attendees: Refer to Sign-Up Sheet
Location: Chelan PUD Auditorium, Wenatchee, WA
Time: 9:00 a.m. – 3:00 p.m.

Meeting Purpose

- 1) Review working group structure and organization
- 2) Provide updates on issues/studies related to Rocky Reach relicensing
- 3) Decide on next steps

Background on Working Group Reorganization

Gregg Carrington (PUD) explained the reorganization of the core relicensing team. He said several comments were received on the Initial Consultation Document (ICD) and Scoping Document, and there seemed to be confusion among stakeholders as to how relicensing relates to the Habitat Conservation Program (HCP). A subcommittee of the natural sciences working group has been formed to address the HCP. Gregg explained that Steve Lachowicz (PUD) has been assigned as coordinator for the HCP subcommittee activities and will act as the liaison between relicensing and the HCP. Steve has also been assigned to work on total dissolved gas (TDG). Scott Kreiter has taken over the lead in natural sciences. Steve Hays recently joined the relicensing team and will act as the technical consultant for both Rocky Reach and Lake Chelan as well as for HCP and TDG. Jeff Osborn will remain the natural sciences lead for the Lake Chelan Project and will serve as a technical consultant for the Rocky Reach Project.

STUDY UPDATES (see study summary handouts)

Mule Deer Mortality Study Update (see handout)

Paul Fielder (PUD) provided an update. He explained the study is being completed in conjunction with the Washington Department of Fish & Wildlife (WDFW), whose initial study area was in the northern part of the state. Chelan PUD asked them to extend the study area to include the Chelan County side of the Rocky Reach reservoir.

The intent of the study is to provide information on the health of wildlife habitat of the 20,000 acres of mitigation lands that were purchased by the PUD for WDFW under the original license. WDFW felt the most important lands that needed to be preserved adjacent to the Rocky Reach Project were mule deer wintering areas between Swakane Canyon to Chelan Butte. The focus of the study is on mule deer; however, the emphasis for Rocky Reach relicensing is to use mule deer as the representative species to assess the overall health of wildlife habitat. The goal is to identify the limiting factors on the wintering ranges and eventually improve habitat.

To date, twenty deer have been marked, and those deer had blood samples taken and were radio collared in order to track them and determine their home summer range. The blood samples provided information on pregnancy rates, parasite loads and disease loads. The radio tracking will provide information on the survival deer and fawns throughout the study, migratory patterns and next year's wintering areas. Paul pointed out the parasite

paralephostromylus was identified in 17 of 22 samples. This parasite may be linked to hair loss syndrome, which reduces insulation value and ultimately results in hypothermia. At this point, analysis is being conducted to determine if there is a connection between the parasite and hair loss syndrome.

The second aspect of the study is the vegetation analysis. By collaring the deer, they will be able to pinpoint which area the deer are using and determine what the habitat conditions are in those areas. Information will also be gathered (significantly in the winter) on the nutritional values of the food and how they change over time. The food the deer are eating and its nutritional value are the two things that managers can improve to maintain or improve carrying capacity.

Bull Trout

BioAnalysts has been selected as the consultant to conduct the trapping, tagging and monitoring. The study will be done in two phases, biological and engineering. Scott (PUD) explained that since the last meeting the scope of the project has been expanded to include Douglas and Grant PUDs. Both PUDs were interested in participating in the study. Trapping will be conducted at Wells, Rock Island, Rocky Reach and monitoring at Wanapum and Priest Rapids dams. The plan is to tag a total of 40 adult bull trout, Rock Island (10), Rocky Reach (20) and Wells (10). Aerial and ground surveys will also be conducted to follow the movement and migrations of the bull trout.

At this time there are not any suitable trapping facilities at Rock Island or Rocky Reach, and the PUD is in the process of reviewing consultant proposals for designing traps that will not interfere with other ESA listed species. As soon as there are several design options available, the PUD will consult with NMFS and other agencies, as well as the working group, prior to making a decision.

Jeff (PUD) informed the group of fish passage numbers he recently received from fish and wildlife. There was a total number of 133 (roughly) bull trout that passed Rocky Reach between May and November, 1999; and, so far, in 2000, 157 (April = 3, May = 96 and June = 58). Some of the fish viewed appeared to weigh in the 8 to 10 pound range. Steve Hays (PUD) mentioned that all of the fish are on videotape, and all of the passages have been documented with date and time.

As far the schedule is concerned, the literature review is beginning now. The goal is to secure permits by the end of 2000, capture and tag from April to July 2001, and monitor through March 2002.

Fish Presence & Habitat Use

Duke Engineering (DES) and RL&L have completed fall and spring samplings. Summer sampling will begin in August. Species collected to date are listed on Table A-1 of the handout. The study will also include sturgeon and the PUD is currently in the permitting process. Tom Dresser (Grant PUD) spoke with Scott (PUD) on June 23, 2000, and provided him an update on the Grant PUD sturgeon study. To this point no sturgeon have been found at Priest; however, they found 10 female and 11 males at Wanapum. The sizes range between 150 to 220 centimeters.

Literature Investigations

BioAnalysts was selected to conduct the study and it is currently under way. There were six issues identified by the working group that needed more information prior to determining if additional studies were needed. The six issues are: 1) pacific lamprey, 2) sports access on Wenatchee River, 3) large woody debris, 4) sediment transport, 5) resident interaction with anadromous fish and 6) pool operation assessment.

Aquatic Habitat Mapping

Duke Engineering & Services mapped 40 transects in August 1999. Fish presence and habitat use results will be used with these results in order to develop utilization curves. As far as the sturgeon study results, more transects may be required to model the habitat depending on where the sturgeon are located.

Creel Census

Surveys were conducted from April through July 2000. Eighty-three anglers were surveyed with 39 interviews. A total of 3 smallmouth bass, 12 walleye and 26 "other" were captured during the survey. The census concludes the effort is very low.

Benthic Analysis

DES sampled macroinvertebrates in September and October 1999, and mollusks were sampled in November 1999. Sampling locations and methodology are indicated on the handout. All survey and taxonomy work has been completed, and results are due in September 2000.

RTE Plant

Calypso Consulting conducted surveys in 1999 and will complete the surveys in August 2000. Three state-listed rare plant species have been found as well as two species that were previously unknown in Washington state. The consultant noted that the occurrence of porcupine sedge has greatly increased since 1991, as well as an increase of giant helleborine since 1990.

RTE Wildlife

DES completed this survey as well. The preliminary results are from the seven intensive sites and 11 roving sites that were selected for the study. Breeding bird, bat, reptile, amphibian and habitat surveys were conducted at each of the intensive sites. At each of the roving sites, breeding bird surveys were conducted, as well as limited bat, reptile, amphibian and habitat surveys. Preliminary results are provided in Tables 1-4.

Water Quality Monitoring

Parametrix provided the second quarter water quality report for the Rocky Reach reservoir. Monitoring for the second quarter report was conducted from October 1999 through July 2000. Scott (PUD) noted that sampling station 2L was relocated to a more suitable substrate for attached benthic algae (ABA) monitoring. Preliminary results show that total phosphorus (TP) and total nitrogen levels were slightly higher in February than they were in October, November and December. Orthophosphate levels decreased upstream to downstream but the decrease was not significant. Measured levels of chlorophyll, turbidity and total suspended solids were all low. Temperature, total phosphates and dissolved oxygen were all within state standards. The appendices are not attached to the report; however, they can be requested.

In regard to temperature, a scope of work handout was provided that would address the effects of the Rocky Reach Project on water temperature. The purpose is to compare existing water temperature with state standards and determine any ongoing project-related impacts on water temperature. The state standard states that temperature shall not exceed 18.0°C due to human activities. When natural conditions exceed 18.0°C, no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3°C. Gregg (PUD) mentioned that from a discussion with Pat Irle (DOE), the standard is from the Canadian border to the ocean. Scott (PUD) added the main goal is to attempt to determine what the Project impacts are on water temperature.

In review of the study approach, Scott explained Parametrix would assess and analyze any existing information. They also have installed continuously recording thermographs to document water temperature. The thermographs were placed in areas that were well mixed (not unusually warm or unusually cold). Bob (NMFS) asked Chris (DOE) to explain the justification for placing the thermographs in well-mixed areas versus how dissolved gases are currently measured. Chris (DOE) responded that he was representing Pat Irle (who could not attend), and that the process at Grant PUD has been a little bit different. He explained that at Grant PUD and at some other dams, they have been looking at multilevel monitors at different times of the year. He added the standard does not say to monitor where water is well mixed, but does say to monitor where temperature standard is exceeded at any point. Gregg (PUD) stated he was a little confused by that statement because there are going to be backwater areas on any river (whether a dam is present or not), and there will be warm areas and cool areas. Chris replied that is how the standards are written and the main thing to determine is what the dam-caused influences are on temperature. Gregg stated that to target warm water in the reservoir is not going to show what the impact of the reservoir is. He continued by saying what is critical is to determine if there is any warming of the mass volume of water as it passes through the Project. Chris (DOE) stated this is Pat's area and suggested the PUD work with her. Bob (NMFS) indicated he is troubled with the inconsistency of standards between sites. He asked if there is a reason for the inconsistency between what is being done at Priest Rapids versus what Pat is doing at Rocky Reach. Chris explained that Priest is a year ahead, and they have already done some monitoring; and, since Grant PUD began the process, the monitoring program has been revised. Bob (NMFS) stated he was not satisfied with the response and requested further clarification for the group in the future.

Chris (DOE) went on to discuss total maximum daily loads (TMDL). He explained that when water exceeds standards, the Clean Water Act states that a plan to meet the standards must be developed. He explained a plan has to be done for both TDG and temperature before a 401 Certification is written. Bob Rose (Yakama Nation) indicated that determining Project effects on temperature is only one aspect and the other is determining biological effects. He continued by suggesting that the protocol be very well thought out in order to describe biological effects of any increase of temperature. Gregg (PUD) responded by saying the PUD's first question is whether the Project has any effect at all. He explained that there are several things that affect water temperature as water flows through a reservoir. Gregg explained when there is a small increase in reservoir surface area and a very high volume, it would be expected that there would be very little change associated with water temperature. Knowing the surface area was increased very little after construction and knowing the high volume of water, increases in water temperature are not expected. If there are increases, it will have to be determined where they are having an effect and where are they located. That is why the PUD wants to concentrate on choosing probe locations that are representative of the total volume of water. Scott (PUD) stated the PUD is interested in complying with state standards and requested DOE and other agencies review the scope of work.

TDG Subcommittee and Parametrix Report

Steve Lachowicz (PUD) explained existing TDG data from the years 1997-2000 was sent to Parametrix for analysis. Parametrix has completed a preliminary report. Although the report is not in a format ready for distribution, a handout was distributed that included some data. Don Weitkamp (Parametrix) explained Table 1, which shows the forebay and tailrace TDG data from 1997 to 2000. The data will be able to provide information to determine what is changing as water passes Rocky Reach. He pointed out the mean river flow for 1997 (extremely high flow year) is much higher than the following three years. He explained in 1997 climate conditions determine the amount of spill. In 1998, 1999 and 2000, spill was primarily determined by fish needs or other needs rather than natural process. Don said the data extends a little beyond the spill season.

Table 2 indicated that under most conditions there is an increase in TDG as water passes Rocky Reach during spill season (which is expected); however, the amount of increase was not as great as originally thought and there is a slight decrease from Rocky Reach down to the Rock Island forebay. Don pointed out that there may be some erroneous readings in the data and some of the extremes may not be real; therefore, it is important to keep in mind that it is the trends and generalities that are important, not the specifics. Steve Lachowicz (PUD) explained that the data presented is only an analysis of existing data, but the PUD has already requested Waterways Experiment Station to conduct a more sophisticated and specific monitoring in spring 2001.

Table 3 looked at gate configurations, which is a common variable at many projects. Don explained that at many of the Columbia River projects, the gates used determine how much dissolved gas is generated. Don pointed out the overriding factor at Rocky Reach is the saturation of dissolved gas in the forebay in determining gas in the tailrace. The data shows that if gas is low in the forebay, it will be low in the tailrace; and, if TDG is high in the forebay, it will be high in the tailrace. He mentioned that because this is such a dominating factor, it would be difficult to separate anything else out from the data. Don added that it is not necessarily true for all projects and he could not recall a dam that showed the same type of data trend as Rocky Reach. Bob (NMFS) stated his agency is looking at a more efficient way to spill from a TDG standpoint; and, from where the HCP could go, is there enough information available to show how to significantly increase spillway discharge. Don responded by saying the existing information will not show how to best increase spillway discharge. He pointed out that not all potential gate configurations have data, so there is a possibility there are other gate configurations that could be better. Steve Hays (PUD) pointed out that Rocky Reach has a different spillway geometry in that it has a shallow stilling basin. It appears the equilibrium point for TDG is reached below 120% and possibly even lower than 115%, while most projects reach their equilibrium at 120%. Steve explained that when Parametrix completes compiling the data, he believes the trends will show that if the water comes in at less than 110%, Rocky Reach spill will raise it toward 110% fairly rapidly. But, if the water comes in above 115%, the chances are that the Rocky Reach spillway will not increase TDG very much unless high spill volumes or bad gate configurations are used. The next step will then be to refine gate settings. Once the PUD knows what can be done operationally, then it can determine what can be done for fish passage and still meet water quality standards.

Bob (NMFS) also wants to know what effects the Project has on benthic organisms; e.g., what effect 110% has on the ecosystem and from Chelan PUD perspective. He wants to see what effects the project has on the ecosystem, not how well the PUD is able to meet a standard. He added that he would not argue that 110% is not safe but needs proof that 120% is safe.

Anadromous Fish Subcommittee

Steve Lachowicz (PUD) explained at the April 12, 2000, meeting, that several agencies involved in the HCP and in anadromous fish issues voiced their concern that they did not have a clear idea on how to participate and bring anadromous fish issues to the Rocky Reach relicensing process. He continued by saying that prior to the formation of the subcommittee, several issues were not being addressed through relicensing. Chelan PUD decided to make a forum available as part of relicensing to answer any questions, whether they were associated with the HCP or Rocky Reach relicensing. Steve pointed out that the Rocky Reach relicensing Web site provides a link to HCP information under the “existing license” category.

Steve Hays (PUD) provided background on the HCP. He explained that a primary reason for the plan was to address the Endangered Species Act (ESA) concerns and, more importantly, Chelan PUD recognized the need to get a head start on resolving anadromous fish issues for relicensing. The HCP was crafted as the basis for the anadromous fish component of the new license application. He mentioned the PUD continues to try to balance the process with NMFS through an ESA perspective and, at the same time, to keep the total package relevant and attractive to the tribes and other interested parties that were part of the initial negotiations.

HCP Update

Bob Dach (NMFS) provided an update on the HCP process. Bob (NMFS) stated the goal is to complete the process by April 1, 2002. Currently the ESA Section 7 Consultation is under way with Chelan PUD, and the term of the consultation goes through the same April 1, 2002, deadline. NMFS will try to make sure the HCP has gone through its process by the same time, because after April 1, the PUD and FERC will have to re-consult with NMFS under the ESA. They are currently behind the scheduled deadline; however, it is still well within grasp. The next step is for signatories to review the draft environmental impact statement (DEIS) and provide comments prior to distributing to the larger HCP coordinating group. The anticipated date for the next level of review is the end of August, and they will be provided a 60-day review and comment period. Once the comments are received, the DEIS will be reformulated based on those comments. Currently there are three activities taking place: 1) interim consultation, 2) development of EIS under the NEPA process, 3) and work through issues that were not resolved at the commemorative declaration.

The remaining issues that need to be discussed involve interpretation. The biggest is the “no-net-impact” (NNI) issue with the tribes. He explained the commitment the utilities made to NNI involved a specific level of hatchery supplementation that could change over time based on adult returns. However, without knowing the exact number that would be produced in a hatchery environment and what type of impact those fish would have on the wild populations, NMFS could not agree to issue a “no jeopardy” opinion on every potential scenario that might result from a supplementation program. For this specific issue, the tribes want a guarantee they will get the number of hatchery fish they bargained for in the process. If NMFS cannot guarantee that, it will need to be renegotiated. He continued by saying that it may be difficult for NMFS and the tribes to reach an agreement. NMFS feels that without that agreement, the HCP does not have enough stakeholder agreement to satisfy the Federal Power Act. Possibly, the tribes could come in under relicensing and ask for other measures that they originally negotiated away for a guaranteed commitment to a supplementation program. He continued by saying rather than having them take that road, NMFS would rather meet with all parties again and see whether they could reach agreement. If an agreement cannot be reached, NMFS will still process the application from the PUD and the HCP will go forward. However, it will affect the final decision, because it will not represent the same type of commitments that it was originally intended to represent. Bob stated that the goal is to get the tribes back on board because the intention is to use the HCP as a settlement package for relicensing. The preference is to distribute the preliminary DEIS and the two biological opinions so all of the HCP negotiators have all of the analyses available prior to discussions. NMFS did recommend the discussions take place, whether the information is available or not, and discussions can begin on the other issues. Steve Hays (PUD) emphasized that the PUD wants the HCP package to be a broadly accepted package for relicensing.

Next Meeting

No date was set for the next meeting.

Action Items

The PUD will consult with the agencies on bull trout trapping designs.

Get clarification from DOE on what data is needed to show whether the Project meets or exceeds state water quality standards.

Reference materials are posted on the Web site, www.chelanpud.org/relicense. Please contact Rosana Sokolowski, (888) 663-8121, Extension 6371, if hard copies are required.

Sign-up sheet

Distribution list

Mule deer study update

Revised proposal to study bull trout

Fish presence and habitat use summary

Aquatic habitat mapping summary

Creel survey summary

Macroinvertebrate sampling summary

RTE plant status report

RTE wildlife study status report

Water quality monitoring report – 2nd quarter 2000

Water temperature assessment SOW

Flow and spill data in regards to TDG study

Relationship between Rocky Reach relicensing and HCP