



Meeting Minutes

PRCC Hatchery Subcommittee

Thursday, June 19, 2008
 Douglas PUD Auditorium
 Wenatchee, WA

PRCC Hatchery Subcommittee Members

Kris Petersen, NMFS	David Carie, USFWS
Jerry Marco, CCT	Russ Langshaw, GCPUD
Tom Scribner, Keely Murdoch, YN	Carl Merkle, CTUIR
Kirk Truscott, WDFW	Denny Rohr, Facilitator

ATTENDEES: (*Denotes PRCC Hatchery Subcommittee Member)

David Carie, USFWS*(by phone)	Jerry Marco, CCT*
Tom Scribner, YN*	Russell Langshaw
Keely Murdoch, YN*	Curt Dotson, GCPUD
Bob Pfeifer, WDFW	Chris Carlson, GCPUD
Greg Ferguson, Sea Springs	Debbie Williams, GCPUD
Kirk Truscott, WDFW	Denny Rohr, Facilitator
Todd Pearsons, Grant PUD	Julie Pyper, Chelan PUD
Jon Merz, WDOE	Ryan Anderson, WDOE

Action Items:

- **Rohr will contact Julie Morgan, UCSRB, about providing an update of PRCC Hatchery Sub-committee activities will be provided to the Upper Columbia Salmon Recovery Board in July by Dresser and Langshaw.**
- **Murdoch will determine if the Annual Trapping Report was distributed to PRCC Hatchery members.**
- **Langshaw will send WDOE anti-degradation policy to the PRCC Hatchery committee.**
- **Grant and Chelan PUD will set up a joint meeting with WDOE regarding anti-degradation issues.**
- **Langshaw will send a map to WDOE for proposed acclimation sites on the White River and Nason Creek.**

- **Ferguson will look at what information the QUAL2K model can produce for the HSC regarding TMDL.**
- **The second draft of the Summer Chinook HGMP will be sent out by Williams.**
- **Dotson/Ferguson will send out a list of acclimation sites/facilities after they have been reviewed.**
- **Dotson will provide the PRCC RFP Predation Study information to Pfeifer.**
- **Dotson will find additional information of handling and tagging effects of PIT-tagging sockeye.**

Final Meeting Minutes

- I. **Welcome and Introductions** - Rohr welcomed attendees.
- II. **Agenda Review** – Additions to the agenda: The ONA HCP Presentation will be held at the Grant PUD SeaTac office on July 16, 2008. PRCC Hatchery Working Group, Rohr, Langshaw and Paul Gray will meet in Wenatchee to update Gray on project status. PRCC Hatchery members will be notified of the meeting date. On August 21, 2008, a ceremony will be held in celebration of the new Priest Rapids License. Because of the ceremony, the August 21, 2008 PRCC Hatchery meeting will be moved to August 19, 2008. **Rohr will contact Julie Morgan, UCSRB, about providing an update of PRCC Hatchery Sub-committee activities will be provided to the Upper Columbia Salmon Recovery Board in July by Dresser and Langshaw.** Interest has also been expressed to provide updates at the UCSRB Implementation Team and Wenatchee Watershed Planning Unit meeting.
- III. **Approval of Meeting Minutes** –
 - May 22, 2008 meeting – Approved with changes by Chelan PUD.
- IV. **Action Items Review** – Action items were reviewed. **Murdoch will determine if the Annual Trapping Report was distributed to PRCC Hatchery members.**
- V. **Anti-Degradation presentation** – Water quality regulations as they will relate to Grant PUD programs were discussed with, John Merz, Washington Department of Ecology, Watershed Unit Manager, and Ryan Anderson, Washington Department of Ecology,. A tier two analyses will need to be developed for each new program Grant PUD proposes. New water quality standards will apply to all water bodies in the state. Standard will determine how much pollutant a water body can handle. Criteria for pH, dissolved oxygen, and temperature in the Wenatchee Basin are based on fish use including migration, rearing and spawning. When a water body doesn't meet criteria, the state

must do a Total Maximum Daily Load (TMDL) to determine how much pollution a water body can handle before standards are exceeded, and what pollutant is causing the problem. If effluent discharged from a hatchery contained fecal matter from warm blooded animals, a Fecal Chloroform Bacteria TMDL would need to be developed. A temperature TMDL will determine the amount of shade needed on a water body's edge to meet criteria. WDOE will work with TMDL coordinators on each proposed hatchery project. The final draft of the new dissolved oxygen and ph TMDL is currently being worked on. In an effort to meet TMDL criteria, WDOE is working on the mainstem Wenatchee River to decrease the amount of phosphorus that is being discharged into river. TMDL criteria try to mimic the natural conditions of a water body. Anderson stated the Wenatchee is a clean river, and there is not a lot of room for phosphorus before the criteria is exceeded. Pearsons questioned if carcasses were used for baseline modeling on the Wenatchee River. Anderson was not aware if carcass data or marine driven nutrients were used in the model. He explained that WDOE standards are based on fish biologist's recommendations. Anderson explained that above Leavenworth, the natural conditions of the Wenatchee River are bumping up against TMDL standards, and that no further degradation can occur with dissolved oxygen or pH. Nutrient enhancement is a large issue that is currently being reviewed by the Yakama Nation, stated Scribner. He explained that the Yakama Nation plans on spending 2 million dollars to conduct a nutrient enhancement assessment. The PRCC Hatchery Sub-committee (HSC) is concerned that fish productivity is low because of the lack of nutrients in a water body, and WDOE is stating that nutrient enhancement causes degradation issues. "I see a train wreck coming", stated Scribner. Anderson stated that artificial nutrients, in dissolved forms, that aren't necessarily co-adaptive with salmon species, are a larger issue for the Clean Water Act. Langshaw questioned if nutrient spiraling would affect the pH and Dissolved Oxygen (DO) downriver on the TMDL model. The goal is to reduce the baseline to bring the river within criteria. To determine how much phosphorus must be reduced to meet standards. Waste water treatment plants account for half of the phosphorus load in rivers, with other significant contributions from ground water, and tributaries. Anderson noted that even without waste water plants, the Wenatchee River would have trouble meeting the standards. Members questioned if WDOE can determine who is discharging phosphorus into the river. Anderson replied that WDOE can measure the City of Leavenworth's phosphorus contribution using the downstream TMDL, but is unable to determine domestic contributions. The city is held to the standards of their phosphorus waste load allocation permit, stated Anderson. Above Lake Wenatchee any increase of nutrients in the lake could be detrimental to the lake, stated Anderson. Models show that DO would be affected to the point that the lake would not meet criteria. WDOE

will not allow for any increase of nutrients in the upper Wenatchee River, noting the lake might assimilate a lot of it, but that may not be good, stated Anderson. Carcass nutrients are sucked out quickly, and do not have detectable nitrogen and phosphorus effects, but it is the effect of the rapid uptake on pH and DO that WDOE is most concerned about, stated Anderson. Pearsons replied that higher in the system, fish do well with large pulses of nutrients, that those nutrients are consumed quickly. Pfeifer questioned how WDOE deals with carcasses. Anderson noted that WDFW tells WDOE what they plan on doing with the carcasses, and questioned Pfeifer how WDFW determines where carcasses will be placed. Carcass disposal protocol was developed in 2002, based on historic distribution, stated Pfeifer. Merz questioned if carcass disposal has an affect on pH and DO. Anderson replied it depends on critical flow, and the time of day and year. He noted the worst time as late August, or early September. Does WDOE have a nutrient trading system, questioned Ferguson. Because load capacities for pH are so low in the Wenatchee River, there is not much of a market to trade nutrients, stated Anderson. Loading capacities in late summer and early fall are not being met. Anderson said it wasn't impossible, but was leery of recommending nutrient trading. If natural conditions were modeled, minus historic carcass data, and pH and DO is already bumping up against the standards, maybe the model is incorrect, stated Murdoch. Restricting salmon recovery because of nutrients, when the fish aren't in the lower river at the time criteria is in violation of the standards over simplifies it to the point of not doing salmon recovery any good, declared Murdoch. Pfeifer suggested that applications of standards are too broad, and should be applied appropriately. Anderson thought that if use was designated incorrectly, those issues could be addressed, but explained it took 6 years for the EPA to accept the new standards. The old standards were based on human use and contact, while the new standards are based on fish use. DO and pH doesn't have a huge impact on humans, but does on fish and invertebrates. Natural processes in the river don't affect TMDL; human caused changes are what WDOE are concerned with, stated Merz. Naturally reproduced fish probably wouldn't show up on TMDL, only added carcass's to the river. Pearsons stated that scientific literature has detected positive impacts on the system by intentionally putting carcasses in nutrient poor systems. Standards were originally derived from WDFW information; they can be amended if the data shown is incorrect, stated Anderson. Once a waterbody is listed on the Clean Water Act 303(d) for rivers, or 305(b) for lakes list of threatened or impaired waterbodies, it is sent to the Environmental Protection Agency (EPA). A TMDL will be completed on the waterbody. The TMDL process goes beyond looking at the analysis of the problem; it asks what will be done to fix the problem. The effect of carcass placement on water quality should be considered by WDOE and all fish management entities. A NPDES

(National Pollutant Discharge Elimination System) Permit will be needed for any future hatcheries, stated Anderson. Murdoch questioned how WDOE standards will affect acclimation sites in the upper Wenatchee Basin, noting that effluent point source, net pens, and other acclimation sites will increase. What is the process that the HSC needs to go through while developing acclimation plans, questioned Langshaw. Anderson explained that some facilities have individual permits, while others operate under general aquaculture permits. Hatcheries are trying to meet low phosphorus discharge standards by changing to low phosphorus feed. If the main issue is how acclimation site discharge exceeding the phosphorus standard is affecting aquatic life, Pearsons questioned if WDOE would consider permitting even though it exceeds TMDL standards, if a study designed to show that aquatic life isn't being negatively impacted is completed. Anderson wasn't sure because TMDL for phosphorus isn't set above Lake Wenatchee. WDOE has a no net increase for the Little Wenatchee, and White River. Both rivers currently have sampling points for water quality parameters. Use Attain Ability (UAA), a method to change the measure. The HSC will need to demonstrate that activities won't affect any downstream areas, stated Anderson. Langshaw suggested that the TMDL model be used to confirm the reach has the capacity to assimilate the phosphorus discharge. WDOE is trying to keep phosphorus levels in Lake Wenatchee lower than 10 micrograms per liter. **Langshaw will send WDOE anti-degradation policy to the PRCC Hatchery committee.** A new facility or an expansion (discharge increase) of an existing facility would move a project to a Tier Two analysis. An increase in pollutants could be allowed if there is overriding public interest or support, stated Merz. No measurable increase in water quality is allowed at Tier Two, and it is up to the proponent to show that there is no change in water quality. Tier Three is categorized as pristine waters, without any degradation. Columbia River water measurement plan is still being required, it only applies to degradation to water quality. The EPA is the final authority of water quality standards. The Clean Water Act was written by the EPA and it includes anti-degradation standards. Anderson suggests that if an acclimation site is located in the White River, the HSC use the QUAL2K model (which can be downloaded from the WDOE website) to figure how much phosphorus can be added before a pH or DO violation of standards would occur. The model uses time of travel studies. A lot of data for the mainstream Wenatchee River and some for the White River have been collected. A calibrated temperature model could be used for baseline modeling input. Anderson suggest that no riparian be removed in the White River because of temperatures. **Grant and Chelan PUD will set up a joint meeting with WDOE regarding anti-degradation issues. Langshaw will send a map to WDOE for proposed acclimation sites on the White River and Nason Creek.** Updates will be brought

to the HSC. Langshaw questioned if other impacts, such as irrigation withdrawals are considered with the temperature TMDL. A Memorandum of Understanding with the EPA, created in 1997, stated water rights are a constitutional land based right, and can't be regulated with TMDL, but as water comes back to the river, the water needs to be clean. The WDOE is entering into a phase of agriculture water re-use, stated Merz. **Ferguson will look at what information the QUAL2K model can produce for the HSC regarding TMDL.** Ferguson stated that for the YN coho projects he would look for an environmental consulting firm to sub-contract the model work to.

VI. Fall Chinook

A **Priest Rapids Hatchery design/VE study update** – Grant PUD and WDFW have scheduled bi-monthly meeting but will meet at least monthly regarding new Priest Rapids Hatchery (PRH) design and other issues. The May 1 and May 14 meeting minutes are in the process of finalization. Mike Nicholls, Grant PUD engineer has met with Jacobs Engineering to discuss design issues and concerns brought up in the meetings. The smolt release channel is no longer required and will be removed from the current design. The avian predation netting is part of the current design but only the support brackets will be installed during construction. If it is determined in the future that netting is needed, it will then be installed. A water to water transfer system is being developed. Aerial drawings of the revised hatchery layout will be provided to the committee upon completion. Upon finalization, meeting minutes will be put into the Jacobs Engineering format and provided to WDFW and the HSC. The U.S. Corp of Engineers has been given an August 01, 2008 deadline to procure funding for O & M costs for rearing up to 1.7 million smolts at the hatchery. This funding would be in effect until construction has been completed (approximately 2011). A mutually agreeable budget is being looked at by Grant PUD and Corps. The Corps has expressed significant interest to produce their mitigation at PRH, stated Carlson. Grant PUD plans on charging The Corps for their share of facility cost because their program will result in increased adult holding, raceways, an additional rearing channel, and a new incubation building. Grant PUD is currently designing the new PRH for Grant PUD mitigation only, so if the Corps commits there will need to be some modifications to the design. Capital cost and Grant PUD's position that their mitigation should be met first remain issues. The Corps was also given August 1 as a deadline to have an agreement (e.g. MOU) to Grant PUD that provides their commitment for PRH capital improvements, stated Carlson. The HSRG and WDFW have expressed interest in Grant PUD taking and incubating 3.5

million eggs at PRH for the Ringold program. Grant PUD has not been part of these discussions but currently doesn't support this because of well water issues. Carlson has requested a formal written request from WDFW regarding this matter.

B HGMP

- **Objectives** – Grant PUD continues to work on HGMPs. Pearsons will be focusing on all HGMPs in the next few months.
- **M & E** – Murdoch's comments have been incorporated into the draft M & E Objectives. Langshaw will review the draft and distribute it to the HSC next week.

C Fall Chinook Work Group – The Fall Chinook Work Group is a result of the 401 Certification. They are responsible for the development of a study plan that evaluates impacts of the Priest Rapids Project operations, under the Hanford Reach Fall Chinook Protection Program, on Hanford Reach Fall Chinook. The draft study plan will be developed and provided to WDOE within 6 months of the new license. The PRCC, WDOE, Hanford Reach Agreement signatories and other interested parties will make up the committee. A letter requesting representatives has been sent out by Grant PUD. The first meeting will be July 01, 2008.

VII. Summer Chinook

A HGMP – The second draft of the Summer Chinook HGMP will be sent out by Williams. Dotson asks that Track Changes be used when providing comments. Comments should be sent to Dotson by August 1, 2008.

B Facilities presentation – Ferguson noted that all tasks have been identified for each facility, but have not been reviewed yet. **Dotson/Ferguson will send out a list of acclimation sites/facilities after they have been reviewed.** Scribner wants to make sure that the sites that Grant PUD is working on are viable. Ferguson and Jacobs Engineering have determined that in order for Gloyd Springs to be used, over-winter acclimation will be required. The tasks list put together are based on that presumption, stated Ferguson. Marco stated he hopes Methow River broodstock collection facilities will be addressed in the HGMP in addition to current mainstem collection at Wells Dam. The current MEOK Hatchery program collects a high percentage of natural origin adults from Wells and infuses them into the broodstock. Marco stated that once the Chief Joseph Hatchery program begins to collect summer

Chinook broodstock, there may not be enough natural origin adults available to meet hatchery program requirements for both programs. Also, not knowing if the fish are Okanogan River origin or Methow River origin is not good science. He would like to investigate if a facility or live capture gears can be developed on the Methow to collect adults for broodstock. The Colville Tribe is conducting a three year study to test different live capture gears in the Okanogan River that are intended to meet both harvest and broodstock requirements for the CJHP. A live capture gear tour in the Okanogan River will take place this August. HSRG recommendations are to define the summer Chinook population genetically.

VIII. Spring Chinook

A **Spring Chinook management in Wenatchee Basin white paper (Yakama Nation-WDFW)** – Pfeifer explained that the Yakamas and WDFW came to a technical impasse regarding broodstock collection. The Off Ladder Adult Fish Trap (OLAFT) can be used to collect genetic samples to identify basin of origin. PIT-tag data shows travel time from Priest Rapids Dam to Tumwater Dam is on average, 26 days. WDFW is struggling with their confidence level at being able to assign fish based on the genetics database. WDFW is trying to get clarification on total genetic recovery rates. Pfeifer stated WDFW's focus is to define a process to better manage the resource by use of genetic broodstock methods for each program. Langshaw questioned if other techniques of assignment have been considered. There are other techniques such as stable isotopes, scales, or micro-element analysis that could be combined with genetics to increase certainty of assignment. Steve Shroeder, WDFW, felt he could get needed information within the 26 travel days. Most of the stable isotope and micro-element work has been done with otoliths, but that process doesn't work well because the fish is dead. Tissue sample collection is being looked at. Langshaw stated he saw a presentation at the Western Division AFS meeting about using carbon and oxygen isotope ratios from live tissue samples to identify rearing locations. Dotson noted that this technique was outlined by LGL in their Predation Study proposal. **Dotson will provide the PRCC RFP Predation Study information to Pfeifer.** A database is being developed for the SNPs method (Single Nucleotide Polymorphism), stated Pfeifer. Resolving alternate brood collection is the issue. After clarification is received, WDFW will update the HSC on the white paper.

B White River

- **HGMP – Section 10** – Work is ongoing.

- Rotary screw trap** – Rotary trap was pulled from May 15 to May 20 because of high water. Subyearling bull trout fry are being seen in the White River. Of the 14 bull trout seen, 12 were fry. Conditions in the USFWS BiOp for bull trout require that fish over 70 mm be PIT-tagged and sampled for DNA analysis. Grant PUD is currently developing a bull trout plan. Grant PUD has asked the Yakamas not to handle the bull trout fry, but to just put them back into the river. Chinook numbers were low (103 wild yearlings). The 8' trap is expected to provide better data collection than the 5' trap. The Yakamas would like to include the 8' trap part of the permanent program. Langshaw questioned Grant PUD's responsibility in development of the bull trout database, analysis and reporting. Carlson explained that the data will be provided by year's end and thought the analysis would be done soon after. Truscott asked that WDFW be able to review the bull trout plan. Bull Trout are covered under the new Priest Rapids Fish Forum (PRFF). Some requirements within the new license are for Grant PUD to develop a plan that includes PIT-tags and genetic samples, stated Langshaw.
- Short term temporary acclimation** – Acclimation sites were visited by Ferguson and Langshaw. Langshaw explained they didn't find obvious upstream sites to use the break-away seine because high discharge makes it difficult to predict what site conditions will be like during low discharge. The McComas site has good potential. Grant PUD will move forward with the permitting process at the McComas property within the next month. The McComas property will be a good test for feasibility. If it works, we will search for additional upstream sites during low discharge. At the Tall Timbers site, sand bags can be used to create a series of impoundments to create enough volume to acclimate fish in. A seine would be placed just upstream of the sand bag impoundments. 20,000 fish would be placed at each site next spring. That would be enough to evaluate, but not be a catastrophic loss if something happened. The 20,000 fish will likely not be PIT-tagged, or differentially CWTed, because there would not be enough information gathered. Langshaw suggested applying the same marking strategy as used last year; by ELISA group and using equal representation from each group. Total production next year would be

160,000. Murdoch stated that avian predation varies pond to pond. Hazing, pond covers, and structures in the pond that give fish a place to hide have been utilized by the Yakama Nation. Murdoch explained that if a pond is used in consecutive years, predation issue gets worse, but if a pond is taken off line every other year, it helps to reduce the incidence of birds. The McComas property could utilize an avian netting cover. A PIT-tag detection system has been installed in the outlet of the Yakama Ponds. An antenna PIT-tag array can be installed by Grant PUD in the acclimation ponds, stated Langshaw. Grant PUD is working on a contract to drill a test well at the McComas site this year. Grant PUD expects the permitting to take two years, and one year for construction. Grant PUD will continue to look for sites that can be utilized for acclimation. WDFW oxbow has serious problems, stated Ferguson. Rohr questioned if habitat funds could be utilized to rehabilitate the oxbow for acclimation. There is potential there, and Rohr will discuss this question further with the PRCC Habitat Sub-committee. Another site to be considered is the mouth of Sears Creek. There are beaver ponds there that could work with spring Chinook. Rohr questioned what public notification might be done in this area. Langshaw stated the public and the Upper Columbia Salmon Recovery Board would be notified. A HPA and substantial shoreline permit will be required. Pyper noted that a letter from the committee with signatories' signatures helps them realize the importance of the project. For the HCP HSC the chair signs the letter instead of the individual agencies.

- **Fish Transfer to LWSNFH** - Transfer of the first generation captive brood from Aquaseed to Little White Salmon National Fish Hatchery (LWSNFH) has been delayed due to a contract dispute with AquaSeed and questions about biological risk. As a result, the transfer permit was retracted. Aquaseed contends that a moving the fish could create a biological risk that would be detrimental to the program. NOAA wrote a letter to AquaSeed stating the biological risks have already been considered and moving the fish is consistent with the existing permits. The HSC expressed their gratitude to NOAA for the support they have given on this matter. A new transfer permit is expected mid next week. If the

transfer permit is received, Grant PUD will move forward with the transfer, regardless of the contract dispute, stated Langshaw. Langshaw stated that Grant PUD's contract with WDFW doesn't require a transport permit. Scribner expressed concern regarding the quality of fish being raised by Aquaseed, and the fact that decisions already made by the HSC are being held up by them. Langshaw will continue to work on a letter from the HSC to formalize their position on the transfer. The HSC has supported the transfer from the start. Langshaw will provide updates to the HSC. WDFW originally planned on using fish tubes to transfer fish, but an experiment utilizing jacks and three year old spring Chinook showed that tubes limited the flow of water, causing two mortalities. The 30 fish that were transported outside the tubes showed no observable impacts. Tubes will not be used for the transfer.

- C **Nason Creek HGMP development** – Grant PUD is working on a contract to put in another well at the Boyce property. The Youngsman property used to be an old railroad depot. Two 6" diameter pipes have been located on the property and will require environment analysis. Soil samples will be taken and evaluated.
- **Rotary screw trap** – The rotary screw trap was pulled because of high water and a hatchery steelhead release. Five juvenile bull trout were trapped, but no fry were.

IX. **Sockeye**

- A **NMFS Letter** – Conditions of the new license require that Grant PUD develop a sockeye HGMP. Therefore, the NMFS letter dated June 13, 2007 is being withdrawn.
- B **Mitigation** – Grant PUD is looking for support that the Skaha Lake program meets their mitigation for the duration of the 12-year study plan only, stated Langshaw. A SOA will be developed regarding this understanding. Truscott suggests ONA be involved with development of the HGMP. The M & E plan should be the same for Chelan and Grant, stated Truscott. Data is collected for the M & E plan that will allow for analysis of adult return, stated Langshaw. Scribner wants to have the SOA to quote the expectation agreement on adult to smolt, and smolt to adult returns. He wants everyone to be on the same page at the end of the feasibility study. PIT-tagging was not done because of concerns with handling actively migrating smolt sockeye. Because all otoliths are marked, consideration should be given to a robust otolith sampling technique, stated

Langshaw. Sample rate, in large sockeye escapement, portion of hatchery vs. wild, hard to get because of numbers on the spawning ground, stated Murdoch. Try to get handling, holding and tagging perfected with 1,000 fish before you tag 10,000 fish, stated Murdoch. Fish collected at the bypass and used in survival studies are anesthetized and held for two days after acoustic tagging, stated Pyper. Sockeye are more susceptible to stress. Scribner requested the WDFW mortality rates of PIT-tagged fish. **Dotson will find additional information on handling and tagging effects of PIT-tagging sockeye.**

- X. **Next Meeting:** The regularly scheduled Hatchery SC meeting will be held on Thursday, July 17, 2008, 9:00 a.m. to 4:00 p.m. at the Grant PUD SeaTac office. Additionally, an ONA meeting will be held jointly with the HCP Hatchery Committee on Wednesday, July 16, 2008, 10:00 a.m. to 12:00 p.m. at the Grant PUD SeaTac office.