



## **BAKER RIVER PROJECT LICENSE IMPLEMENTATION**

### **Aquatic Resources Group**

**April 14, 2009 (9:00 a.m. - 1:40 p.m.)**

**WDFW Mill Creek Office  
16018 Mill Creek Boulevard  
Mill Creek, Washington 98012-1296  
Telephone (425) 775-1311**

**Conference Call Line: 1-888-228-0484, ID: 6058, Password: 12345**

**Please tell Arnie (425-462-3442 (w) or 206-276-0316 (c)) if you plan to call into meeting**

### **AGENDA**

1. Presentation on USACE Flood Control Operations (USACE-Ken Brettmann)	9:00 - 10:00
2. Review meeting notes/agenda/action items from March 10th, 2009 meeting	10:00 - 10:15
3. BRCC and License Process Update	10:15 – 10:30
<i>Break at 10:30</i>	
4. Placeholder for Comments- Draft Fish Propagation Facilities Plan	10:30 - 11:00
5. Required Decision Today: <ul style="list-style-type: none"><li>• None</li></ul>	
6. Introduction of Cushman Sockeye Program (Tacoma Power-Marc Wicke)	11:00 - 11:15
7. Hatchery Update (PSE-Jenness)	11:15 - 11:30
8. Brief Updates Fish Facilities Operations Topics <ul style="list-style-type: none"><li>• Sockeye Spawning Beach and AI Operations (WDFW/PSE)</li><li>• Sockeye Fry Sampling Protocol and Criteria for Effluent Chlorination (WDFW)</li><li>• Sockeye Fry Releases (WDFW)</li><li>• Fish Rearing Inventories &amp; Releases (PSE-Bruland)</li><li>• Adult Trap Protocol Update or Changes</li><li>• Skagit River Fish Update (Fall Returns) (WDFW)</li></ul> <i>Lunch Provided at 12:00</i>	11:30 – 12:30
9. FPTWG Updates	12:30 – 1:00
<ul style="list-style-type: none"><li>• FSC &amp; Adult Trap Design Consultation Administration (PSE)</li></ul>	



**Aquatics Resource Group Meeting  
Final Meeting Notes**

April 14, 2009 ~ 9 am – 2:40 pm  
**WDFW – Mill Creek**

**Team Leader: Arnie Aspelund, PSE, (arnie.aspelund@pse.com)**

**PRESENT:** Arnie Aspelund, Cary Feldmann, Nick Verretto, Jacob Venard, Doug Bruland, Jory Oppenheimer, and Kathy Kimbell (PSE); Mark Hunter, Brett Barkdull, Kevin Kurras, and Jed Varney (WDFW); Phil Hilgert (R2); Arn Thoreen (Skagit Fisheries); Steve Fransen (NMFS); Bob Helton (Citizen); Lou Ellyn Jones (USFWS); Craig Olson (NWIF); Stan Walsh (SRSC); Jon-Paul Shannahan (Upper Skagit Tribe); Mark Killgore and Dave Jenness by phone (PSE); Lyn Wiltse and Jamie Riche (PDSA Consulting).

**GUESTS:** Ken Brettmann (USACE), Marc Wicke and Paul Hickey (Tacoma Power)

**UPCOMING MEETING DATES**

**BRCC:** April 22, 2009 (Article 505 meeting to follow)

**FPTWG:** April 28, 2009 Site visit ... April 29 meeting

**ARG:** May 12, 2009, and second Tuesdays throughout 2009

**DECISIONS** – none today.

**NEW ACTION ITEMS**

- All: Review draft Sockeye Fry Sampling Protocol, send comments to Craig / Jed by April 30.
- All: Let Nick know if you would like to join the April 28 site visit.
- Jed: Within the next month, reconvene a teamlet to address sockeye fry release strategies.
- Nick: Send out two LB FSC schedules, one w/ existing date, one extended by 1 year.

**PREVIOUS, STILL RELEVANT, ACTION ITEMS**

- Mark K: Convene an Article 107c teamlet Summer 2009, including Stan W., Bob H., USACE, Skagit Co., and a PSE hydrologist(s) and biologist(s).
- All: Ensure your agency / organization has identified its representatives to the BRCC.
- Cary: Check representative response status, follow up as needed.
- Brett: Set up meeting w/ co-mgrs to address holding **this** year's planting of sockeye adults.

**REVIEW OF AGENDA, NOTES, HANDOUTS**

There was one correction to the March notes. Arn's feedback about offline networking and collegiality

was an appreciative comment and should have been listed in the “worked well” section.

**Reports on Action Item:** Jed looked into disease policy issues re: WDFW’s request to plant Rainbow in Grandy and Vogler and reports that it is OK to plant 500 to Vogler and 1000 Grandy, first week of May.

### **USACE “FLOOD DAMAGE REDUCTION” PRESENTATION**

Ken Brettmann, USACE, walked the group through the Corps’ operations related to flood damage reduction. He pointed out that the Corps uses the phrase “flood damage reduction” rather than the less accurate “flood control.” The general goal is to reduce height and duration of peak river stages above a damage threshold, to reduce property loss and prevent loss of life ... basically, to mitigate risk. Ultimately, though, Ken pointed out that when people live in a flood plain, they are at risk for flooding.

Upper Baker’s operation includes a three party agreement between PSE (provides flood storage space), BPA (Bonneville Power Administration reimburses PSE for generation losses related to flood storage), and the Corps (regulates flood storage from Oct – Mar).

Weather forecasting has improved to provide greater lead-time for the “pineapple express” events that often cause flooding events in Western WA. River flow forecasts still have quite a bit of variability because even relatively minor changes in precipitation location can have large effects on hydrology of our region’s river systems. Formal operations in the Skagit River basin are initiated 8 hours prior to when the natural flow in the Skagit at Concrete is forecasted to exceed 90,000 cfs. The ability to reduce flooding and consequential damage is limited by the upstream storage capacity. Releases from Upper Baker take about 2 hours to get to Concrete. Releases from Ross Dam take about 10 hours to get to Concrete.

Ken walked the group through slides describing a couple of actual flood events, showing forecasts, actual precipitation and river flow, and Corps operations. The PowerPoint will be converted to PDF and attached to these notes.

*As required in Article 107(c) we will develop a protocol in collaboration with an ARG teamlet around how exceptions to agreed fish flows might be made in the face of predictions of high flow events.*

### **SETTLEMENT AGREEMENT 4.1.2 AND ARTICLE 107C**

Cary reported that PSE remains in ongoing discussions with Skagit County in compliance with Settlement Agreement section 4.1.2 and Article 107c. The discussions are preliminary at this point. We will get clarification about when and how the ARG will be involved at the BRCC meeting next week.

### **CUSHMAN SOCKEYE PROGRAM OVERVIEW**

Marc Wicke and Paul Hickey from Tacoma Power explained that the Cushman Settlement Agreement included a supplementation program with the intent to restore Steelhead, Spring Chinook, Coho, and Sockeye to the watershed. The FERC license may be issued as early as this summer, and over the course of the next five to ten years (but not before 2011 or 2012), this program will require donor stock; the Baker, White, and Cedar River projects were mentioned as possible sources of donor eggs.

Ultimately, when the project is fully expanded, they want 2 million Sockeye in the project, so they are in the market for eggs. Next steps: The Skokomish Tribe will talk with the Skagit Tribes about the donation possibilities. From there, it would become a decision for the fish co-managers to make.

## **HATCHERY UPDATE**

The contractor, McDougal-McMillan, mobilized the first week of April. They are working six days per week and have started clearing and grading operations; earth work and installation of underground piping will begin within the month, concrete will be poured in early July, and they are on track toward the goal of having the building enclosed by November. Coordination with hatchery operators is going well. Anyone who would like to observe the construction should let Arnie know. (There will be plant check-in and safety protocols) The new hatchery building and raceways should be ready June 2010; spawning beaches should be ready Nov. 2010.

Ernie Brannon has provided written comments to PSE from his March 4 on-site review of the plan. PSE is in the process of reviewing his comments, some of which are outside the scope of the Settlement Agreement. ARG members expressed a desire to see his comments prior to the June 1 deadline. PSE will send Ernie's comments out with their comments in the next few weeks.

## **DRAFT FISH PROPAGATION FACILITIES PLAN**

The official copy of the draft fish propagation facilities plan is out for review, sent certified mail 3/31/09 to designated ARG representatives and courtesy copies to others. PSE has received one reply, so far. Written comments are due to Arnie by June 1.

## **FISH FACILITIES OPERATIONS TOPICS**

**Fish Rearing Inventories:** Doug B. walked us through the Baker Hatchery Fish Inventory (4/10/09). Doug reported that hatchery construction activities are not negatively impacting current operations.

RR-1: RC freezebrand have been released for mark/recapture study. The RR-1 is prepared for receiving 130,000 Sockeye fry. The small fry troughs over RR-2 are being prepped to receive 223,000 Coho fry. Will feed and hold until May; 65,000 to hold, remainder for Lake Shannon.

The trout pond is holding Rainbow; 1,000 will be released into Grandy, 500 into Vogler Lake. The Upper Skagit Indian Tribe will contact PSE soon re: the trout for their derby, and the remaining Rainbow will go into Depression Lake. The Troutfest Derby was cancelled again this year due to hatchery construction activities.

Circulars 1 & 2 are now empty. Normal mark/recapture study group fish were released a week early to Baker Lake. The remainder of the Coho in the big circulars will go to Skagit River in April.

Net pens at the UB FSC: Pit-tagged fish will be released this and next week for the UB fish passage biological evaluation study. The smaller number of acoustic tagged fish will be released to Lake Shannon for study in May.

**Spawning Beach and AI Operations:** Kevin Kurras reported that beach operations are going well. Contractors are careful and collaborative. Kevin sits in on their Monday planning meetings. The operations manual for the existing fish propagation facilities operations has been prepared, WDFW – Kevin has a copy; updates to the living document will include safety, disease protocol (revisions), etc.

As of Saturday (4/11), we exceeded a million out of Beach four. The counter appears to be working well (continues to match visual estimates of magnitude). First plant went out February 17 at the boat launch. They will now be planting between Beach three and Blue Tarp.

Artificial Incubation: Were able to hold everything until March 30. All AI fry are going to Beach three. Kevin reported that ponding loss (unhatched eggs in the trays) has been remarkably low this year ... less than 1%. And no trace of IHN yet this year. There was great rejoicing across the land.

**Sockeye Fry Releases:** Jed noted that - due to the cold season (which Jed pointed out is not unusual when compared with 'the norm' of ten or fifteen years ago) - we would not have had a place to release our fish if it weren't for PSE's repair of the road to Beach three. We still lack Shannon release sites (we need some sort of acclimation pond there) ... Are we being short-sighted to rely only on Blue Tarp when we decommission Beach three? Maybe retain some "natural ponds" that we could plant to? We seem to see a little higher loss in AI fish when we plant them; Jed thinks this is likely due to handling. The new hatchery should resolve that issue. The decommissioning planning will be based on the ARG proposal. In the meantime, Jed will reconvene a teamlet to address sockeye fry release strategies.

### **SKAGIT RIVER FISH UPDATE (Fall Releases)**

**Last Fall:** Coho: we saw about 21,000 in the Skagit basin (prediction was 65,000). Chums: Got 21,000 (also about half of prediction). Sockeye: 5,000 total (forecast was 25,000). Similar trend to Lake Washington and Frasier. Spring Chinook: 1,500 (forecast was 1,400). Summer Falls: 11,600 (forecast was 2,300).

**Predictions:** Coho 33,000, Chums 20,000, Sockeye 4,000, Pinks 1.2 million, Summer Falls 24,000, Spring Chinook 1,400.

### **SOCKEYE SMOLT CAPACITY STUDY**

Phil reported that they have a proposal and methods outlined and have begun implementing the plan. It called for beginning to collect zooplankton samples in February, but Baker Lake was iced over. The plan includes a total of eight separate sites. They went out March 3 and were able to collect data for the lower two sites; in late March, they were able to get to two more (for a total of four sites); they were able to collect data at all six spring sites on their April 7 sampling. They will be out again in late April and will collect from all eight summer sites May – October. They are also looking at water quality and euphotic depth. We are awaiting the zooplankton data (anticipating low numbers from the initial samples due to cold water). The May – Oct. data will give us an idea of the smolt reservoir capacity. The timing of fry is a separate issue. Stan pondered how we can avoid possibly cropping off a population? Next steps: Research the relationship between productivity and water temperature. We'll get another update in summer.

## **SOCKEYE FRY SAMPLING PROTOCOL, CRITERIA FOR EFFLUENT CHLORINATION**

Kevin and Jed explained the fry sampling protocol. After two weeks with no IHN, the weekly sampling goes to every other week. The state's new policy calls for a sampling and containment plan for each facility. Jed distributed the rough draft containment plan that will be integrated into the hatchery ops manual, and then updated every five years. It calls for not automatically killing fish when IHN is found ... instead, it includes a provision for full containment to give co-managers (policy makers) time to make the final determination. All were asked to review the draft and email comments to Craig / Jed by April 30.

## **FISH PASSAGE UPDATE**

Nick reported that the FPTWG last met March 17 by conference call. Also there was a conference call with the ARG March 25<sup>th</sup> on the adult trap work window (meeting notes provided as part of handouts). There will be a site visit April 28 including UB FSC and Sulphur Creek, the potential site for the LB FSC, and the adult trap. Let Nick know if you want to attend. The next meeting is April 29 in SeaTac.

**UB FSC:** Nick reported on a pump problem. A false alarm stated water entering pump housing; they examined the pump, and it looks like it was a sensor malfunction. The 500/1000 study will start Monday and we need all four pumps to do the tests ... it looks like we're in good shape. Baffle control system will also allow for the switch from 500 to 1000 cfs. We changed the baffle spring system and it appears to be working well. Starting next Monday morning, we will automatically switch the baffle each day at 8:00 am (programmed in the PLC). The first fish release will be tomorrow instead of tonight. We'll put out Sockeye for the next four nights and will start putting out the Coho on Monday.

**UB Adult Trap:** The trap outage plan is being followed. Construction has begun at the LB upstream trap.

**LB FSC:** At its March 17 conference call, the FPTWG discussed the possibility of modifying the LB FSC schedule, which calls for it to be operational by March 2012. PSE is requesting a one-year schedule extension, mainly due to lessons learned at the UB FSC (design didn't start until experts' workshop July 2003). The recently hired consultant is scheduled to start work on the design on Monday. Nick feels like nine months is insufficient time to complete the design. The consultants concur. Nick feels they need two months to come up with a 10% conceptual-level design. The design will be more complex than it was for the UB FSC. As per Article 601, PSE will send out a formal call for a decision on this (with the two week timeframe). There was a request that PSE develop two schedules, one with the original date and one with the date extended by a year (Nick will do asap).

## **ARTICLE 505 TEAMLET:**

Jacob reported that the Article 505 teamlet met two weeks ago. Draft plan is due to be complete in year one – how projects will be identified, evaluated, and implemented. They have begun to list the criteria. \$50k / year is available each year for planning and site identification purposes. There will be discussions and approval of this teamlet's recommendations by the ARG and TRIG. They will meet again after the BRCC meeting on the 22<sup>nd</sup>.

## **HANDOUTS**





- Agenda, 3/10 meeting and 3/25 conf. call notes, Meeting Schedule, ARG Representative List
- Fry Production Worksheet
- Baker Hatchery Fish Inventory April 2009
- Baker River Adult Fish Return
- Baker Adult Trap Protocol
- Lower Baker FSC Design and Construction Schedule Considerations – FPTWG 3/17/09
- Baker Estimating Sockeye Smolt Production Capacity: Status of Field Data Collection 4/14/09
- Sampling and Containment Protocol for Baker Sockeye Beach 4 Emergent Fry, April 2009

## **MEETING EVALUATION**

### **Worked Well:**

- Stan only six minutes late (early by “Stan standards”)
- Group dynamics: comfortable joking with each other / not taking things personally
- USACE presentation
- Great showing by our Olympia contingent
- Tacoma’s request (nice to have outside group come ask something of us!)

### **Do Differently:**

- Seeking more honest / open disclosure (need clear feedback to create linkage between design process and actual construction)

## **AGENDA FOR NEXT ARG MEETING**

### **May 12, 2009; WDFW Mill Creek**

1. Welcome, review notes, action items, agenda, norms
2. BRCC and License Updates
3. Fish Passage Update
4. Implementation Plan Updates
5. Article 505 Aquatic Riparian Habitat Teamlet Update
6. Presentation: Wind Integration (Steve St. Clair)
7. Hatchery Update
8. Fish Operations Topics
9. Evaluate meeting, set next meeting agenda & location



10. Other License Implementation Updates	1:00 – 1:30
<ul style="list-style-type: none"><li>• Sockeye smolt capacity study update</li><li>• Article 505 Teamlet update</li></ul>	
11. Evaluate meeting, set agenda for next meeting (May 12 <sup>th</sup> , 2009 at Mill Creek)	1:30 – 1:40