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## BAKER RIVER PROJECT RELICENSE

### Aquatic Resources Group

March 14, 2006

9:00 a.m. – 3:00 p.m.

USFS Supervisor's Office

21905 64<sup>th</sup> Avenue W

Mountlake Terrace, WA

(425) 775-9702

### Conference Call Procedures-Dial In Info :

**1-608-250-9675** (call automatically charged to PSE)-Dial in at the designated date and time –

Conference Password: **259755**

### DRAFT AGENDA

1. Review Agenda, Notes, Actions	9:00 – 9:15
2. Fish Facilities Operations Topics <ul style="list-style-type: none"><li>• Juvenile Fish Facilities Operations Planning</li><li>• Juvenile Passage Biological Studies</li><li>• Sockeye Spawning Beach &amp; Artificial Incubation Operations</li><li>• Update on Allocation of Artificial Incubation Sockeye Fry</li><li>• Fish Rearing Inventories &amp; Releases</li><li>• Adult Trap Protocol Update or Changes</li><li>• Update on April Lower Baker Outage</li><li>• Update on Imprinting/Release Sites for Chinook study</li></ul> <i>Break at 10:30</i>	9:15 – 11:00
3. Update on Early Implementation Activities <ul style="list-style-type: none"><li>• Fish Propagation Facilities Design Update</li></ul>	11:00 - 12:00
<i>Lunch (provided)</i>	12:00 – 12:30
4. Early Implementation Activities (cont.) <ul style="list-style-type: none"><li>• Fish Propagation Facilities Design Update (cont.)</li><li>• Fish Passage Technical WG Report</li></ul>	12:30 - 1:15
5. Relicense Studies Update	1:15 - 1:30
6. BRICC/FERC DEIS Update	1:30 - 1:45
7. Confirm Date (June 6) & Agenda for Next Meeting, Evaluate the Meeting	1:45 - 2:00



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**Baker River Project License Implementation**

**Aquatics Resource Group Meeting  
Final Meeting Notes**

March 14, 2006  
9:00 am - 2:00 pm  
**USFS Mountlake Terrace Office**

**FINAL MEETING NOTES**

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

**PRESENT**

Arnie Aspelund, Cary Feldmann, and Doug Bruland (PSE); Steve Fransen (NOAA Fisheries); Stan Walsh (SRSC); Chuck Ebel (ACE); Rich Johnson, Jed Varney, Kevin Kurras; and Ted Thygesen (WDFW); Scott Lentz (USFS); Jon-Paul Shannahan (Upper Skagit Indian Tribe); Lou Ellyn Jones (USFWS); Bob Helton (Citizen); Stan Zyskowski (NPS); Mike McGowan, (HDR/FishPro); Lyn Wiltse, facilitator, and Jamie Riche, note-taker (PDSA Consulting, Inc).

**NEXT MEETING DATES**

**NOTE: The March 28, 2006, BRICC Meeting has been re-scheduled (tentatively) for April 11.**

**June 6, 2006, 9:00 – 3:00, ARG (USFS, Mountlake Terrace)**

**September 12, 2006, 9:00 – 3:00, ARG (USFS, Mountlake Terrace)**

**QUOTABLE QUOTES**

“Skill and science will prevail over the untrained mind.” – Doug Bruland

**AGENDA TOPICS**

9:00 – 9:15 Review Notes, Agenda

9:15 – 11:00 Fish Facilities Operations Topics

- Juvenile Fish Facilities Operations Planning
- Juvenile Passage Biological Studies

- Sockeye Spawning Beach & Artificial Incubation Operations
- Update on Allocation of Artificial Incubation Operations
- Fish Rearing Inventories & Releases
- Adult Trap Protocol / Changes
- Update on April Lower Baker Outage
- Imprinting / Release Sites for Chinook study
- 11:00 – 1:15 Update on Early Implementation Activities
  - Fish Propagation Facilities Design Update
  - *Lunch (provided)*
  - Fish Passage TWG Report
- 1:15 – 1:30 Relicense Studies Update (A-38 Native Char & A-09 Instream Flow)
- 1:30 – 1:45 BRICC / FERC DEIS Update
- 1:45 – 2:00 Confirm date (June 6) & agenda for next meeting; evaluate meeting

### **NEW ACTION ITEMS**

- Arnie – Follow up with Cary’s Norwegian re: fry counters (uff-da!).
- Jon-Paul – By the end of April, work with Arnie to set up a conference call (w/ Stan, Doug, Steve, Jed, Kevin, Cary, Rich) to discuss hatchery program management.
- Arnie – Send Bob H. a hard copy of HDR’s Hatchery PowerPoint presentation. [DONE]

### **OLD (STILL PERTINENT) ACTION ITEMS**

- Doug B – Start tracking the zero age sockeye fry ... and let the fish go :)
- Cary – Work with Arnie to find a way to summarize BRC activities for the rest (BRC 101).
- Gary – Come up with directive to handle brook trout, coordinate with other co-managers and bring back to the group.
- All – Ensure your organization has a primary and back-up rep listed on the Attendee List.

### **BRICC UPDATE**

Lyn let the group know that the BRICC (Baker River Interim Coordinating Committee) has not met since June 2005 because they are –still– awaiting the DEIS from FERC. Last we heard, FERC was anticipating mid-February, we haven’t received an updated timeline. At this time, PSE is anticipating that FERC will issue an annual license which will remain in effect through April 2007.

The purpose of the next BRICC meeting, when it happens, will be to walk through the DEIS and formulate initial comments. Keep staying tuned.

### **FISH FACILITIES OPERATIONAL TOPICS**

#### **Juvenile Fish Facilities Operations Planning**

Doug Bruland (PSE) reported that the Lower Baker reservoir is low in preparation for a outage planned for April to perform several plant maintenance projects. The Lower Baker guide net has been floated out into position, but not yet unfurled to full depth. It will be attached to the fish collection barge next week the Lower Baker juvenile passage facilities will be operational by the end of March.

Using a remote operated vehicle (ROV), PSE conducted an inspection of the Upper Baker guidenet in February and found no problems. PSE has been getting the Upper Baker juvenile passage facilities ready

to begin operation. Annual inspections and maintenance are complete and the attraction barge and juvenile trap facilities are ready to begin operation on March 15th.

PSE will install the juvenile trap into Little Park Creek and monitor wild juvenile fish trap counts this year. The trap box is in good shape and will be installed the week of March 20th. The effort will contribute to mark-recapture data collected at the Upper Baker trap.

### **Juvenile Passage Biological Study**

PSE is devising a biological testing program for the future new downstream passage facilities. This spring PSE will begin the first year of developing and testing the methodology prior to the functional testing of new facilities in 2008. In preparation for this year's study, net pens have been purchased to hold the specific test groups of juvenile fish and are positioned next to the trap at Upper Baker.

### **Discussion about Sockeye Fry Collected in Downstream Passage Facilities**

This year, we will return sockeye fry to Baker Lake that have all the appearances of being fry, if there is an increasing number of those that appear to be large fry or small smolts we will need to decide if these are to be passed downstream. How will we determine a small smolt from an obvious fry is still a question to resolve. There were an unusually high number of these apparent large fry or small smolts last year (9,000) toward the latter part of the migration season, and samples of these indicated they were 0+ age. After some discussion, we agreed to sacrifice and collect gill samples from some of these fish for analysis of smolt readiness.

If the numbers repeat high this year, we may want to consider another type of study for next year. Doug will keep us posted on the numbers for this year. We will ultimately be looking at developing a juvenile handling protocol.

### **Fish Rearing Inventory / Releases & Biological Study Groups**

PSE has a new circular (as reported at the last meeting); Doug reported that they're reaching capacity and struggle with available space, but are getting by. See that handouts for inventory data. Raceway 1 is being used for delayed-release sockeye fry, which will be transferred to Baker Lake next week.

Population = 255,000; 2,600 fish/pound. Raceway 2 currently has 32,000 Coho we're moving into a big circular to make way for the Coho fry. These will be released to the Skagit River mid-May. Population = 33,000, 21 fish/pound. Raceway 5 - we're getting fish out of incubators. Trout pond population = 20,000, 9.7 fish/pound. Trout will be distributed to Depression Lake, a Tribal donation of 1,000 for their trout derby, PSE's Trout Fest derby in June, and various charity events.

Circular's 0 - 2 contain freeze-branded groups that will be released April 15th to Baker Lake and Lake Shannon. Circular 3 contains ad-clip Coho that will be released to the Skagit River mid-May. Circular 5 has the juvenile passage biological study fish that are PIT-tagged and are to be transferred to the new net pens. These will be released incrementally throughout the season. We will be sending in gill samples and comparing with control groups to see what percent of the fish are migrants. The study plan closely follows what was done in the past. Population = 3,000, 27 fish/pound. This study should help us structure our evaluation when the FSC is built. The fish in the vault are a group of freeze-branded Coho that are to be released April 15th with the other freeze-brand groups. Sockeye incubation - 1.2 million eggs in incubation with transfers being made weekly to intermediate tanks for swim up and feeding prior to

release at Baker Lake. Coho incubation – most losses immediately show when the eggs are shocked to segregate eggs that are not viable from developing eggs (Doug estimated present egg loss at 4%).

### **Artificial Incubation Operations & Sockeye Spawning Beach**

Kevin Kurras (WDFW) reported that Beach 4 sockeye fry has been migrating out well (267,000). Counters have been re-calibrated. The Smith-Root counters were lab tested and reported to calibrate correctly, but when returned to use in the field with fry present there still seems to be issues of accuracy with the counting perhaps problems with individual tunnels in the counting heads inconsistent with or not detecting fry. For instance, observed magnitude of fry in section 4A is on par with the magnitude of fry observed in the other sections, but the counter is failing to match up with the expected magnitude. Of the four sections, counters in sections 4B and 4C do seem to be counting well.

In comparing the strength of fry emigration observed at this point of time to the same point of the past four years of record, we are right in line with what we normally see as fry production. This is true even though adult sockeye spawners were loaded to 60% of normal in the beach due to a the low 2005 return. Fry releases are going well; and they are getting up to the blue tarp release site as weather allows – still a lot of snow up there.

Kevin passed out an artificial incubation program worksheet and reported we're on track with 1,150,000 eggs. With a 2% ponding loss, the number of fry produced will be 1,134,742 (130,000 of these will be retained for the delayed release).

Finally at Beach 3, with the snow levels at 120%, we ought to have adequate water supply this summer and fall to be able to use Beach 3 again. We will confirm this decision at our June meeting. If we don't revisit this discussion for some reason, we give an OK on using Beach 3 in the beach loading plans.

### **Allocation of Sockeye Fry from Artificial Incubation:**

We discussed our decision about the allocation of fry produced from artificial incubation and how we reached it. For this year 100% of the sockeye fry from the artificial incubation program are to go to Baker Lake. The decision was a result of the low 2005 return. For next year, we'll want a decision by February 1 for the 2007 protocol if we are to be putting all fish in Baker; or some in Shannon. We'll discuss the 2007 protocol at our September 2006 meeting.

### **Adult Trap Protocol / Changes & Imprinting / Release Sites for Chinook Study**

Arnie walked us through the Baker Fish Trap Protocol handout. At this time there doesn't seem to be a need to change it. We will continue to revisit the protocol at each meeting for any updates. The Chinook acclimation/imprinting study may have some bearing on this. The adult trap maintenance was scheduled to occur with the Lower Baker outage in April, however the schedule for the outage has changed (more on this to follow); Doug will talk with Jason about timing for the annual maintenance. The Chinook study folks may want to be able to utilize the Baker River above the barrier dam for imprinting their indicator stock returns. Could the release of the group be timed with the adult trap outage? Stan W. will coordinate this with Arnie. Kevin shared that the release of these fish is usually June or July. There is concern that they might not be ready in May when the trap is normally shutdown for maintenance.

### **Lower & Upper Baker Outage Update:**

PSE had planned to take a four-week outage in April to complete several maintenance projects including installing a new transformer at Lower Baker. With above average rainfall and a landslide on the west bank, PSE has been monitoring ground stability to support design on the new unit. FERC requested a team of geology/slide experts to follow geological disturbances as they plan to build their powerhouse. Some ground cracking, which seems superficial in nature, is occurring above the Lower Baker powerhouse. In order to install the new transformer at Lower Baker, they will have to open the powerhouse roof. They decided that given current conditions, April is bad timing to take the outage due to the risk associated with a slide. PSE will postpone the transformer work until a later date when safety can be better assured. The Lower Baker outage is now tentatively planned for mid-September (four-week outage) because the conditions will be more suitable and they will be shut down anyway in accordance to the Interim Protection Plan. PSE is still planning to install trashracks at Upper Baker in April and will shut down that plant during installation.

## **UPDATE ON EARLY IMPLEMENTATION ACTIVITIES**

### **Fish Propagation Facilities**

Arnie recapped our previous activities re: the design process for the Baker Hatchery, consultations with the agency & tribal technical experts and reported that we are progressing toward 15% design development by the end of March.

Mike McGowan of HDR/FishPro Engineering walked the group through the progress and current design with a PowerPoint presentation (emailed separately with meeting handouts), comparing initial concepts and current designs arrived at following a course of consultations and recommendations made by agency and tribal technical experts. The present design changes have incorporated those recommendations.

Within the presentation, Mike walked the group through the pros and cons of two facility site layout options, the hatchery building, adult holding pond designs and modifications to Beach 4. The group expressed a preference for option one of the site layout and overall satisfaction of the designs.

The group discussed program decisions regarding managing fry timing or delaying releases, using unfed or fed sockeye fry, which could have capacity and design implications. Jon-Paul will work with Arnie to set up a conference call to discuss hatchery program management. [Lyn summarized the conversation in song: “You gotta know when to hold ‘em, know when to cold ‘em; know when to feed ‘em some; know when you’re done.” While folks agreed the summary was right on, the singing received mixed reviews...]

We need to be at the 15% design level in order to have sufficient detail to get the permitting process going. It isn’t clear if PSE needs to go through a local permitting process. Scott Lentz will help champion this effort from the side of USFS, and reported that they may need a couple months lead. Cary also reported that Whatcom Co. has been very helpful.

### **Fish Passage TWG**

Cary reported that the FSC is now 100’ in front of the forebay and now has large flotation “belly tanks” so the facility can be dried up (above the water line) as needed. PSE has been looking at the discharge pattern and what that would do to flow conditions the reservoir. They have been running a lot of hydraulic computer models to evaluate different options. Cary described a self-contained fish pool / cradle

arrangement that can be lifted out of the FSC intact and placed onto a truck for transport... this is intended to eliminate the current mortality issues. There would be 6 interchangeable pools: 2 for Shannon and 4 for Baker. They are hoping there will be enough room to have a sampling station right on the dock of the FSC. Almost anything can be accommodated because there is a lot of flexibility in the design. We'll have a lot more information after next week's Fish Passage Technical Working Group meeting (at Sea-Tac, March 21). They are planning to begin construction in July and be operational with the new FSC by March '08.

## **LICENSE STUDIES UPDATE**

### **A-38 Native Char**

Arnie reported that a posted version of the 2005 Char Report should be out in April and at that time they will be meeting with the USFWS and other interested parties to discuss the results of the 2005 study and proposed 2006 activities.

### **A-09 Instream Flows**

The full draft report, currently at 300+ pages, should be out in time for us to review prior to discussing at our June meeting.

## **HANDOUTS**

- Agenda & Notes
- Spawning Beach Update
- Baker River 2005 Coho Incubation Log
- BY05 Fry Production Beach 4
- WDFW Fish Program Science Division, Sockeye Spawner Age Estimates
- Baker Project Fish Inventory
- Baker Adult Fish Trap Protocol
- Baker Hatchery Concept – 15% Design Development Progress Drawing Set

## **MEETING EVALUATION**

### **What Went Well**

- The Return of Deviled Eggs!
- Got done early
- Good discussions
- Hatchery presentation (our suggestions were included!)
- Doug's quote
- We have Rich J. :)
- "You gotta know when
- Kevin's Passion & Sensitivity
- Nice energy carried the day ...

### **What to Do Differently**

- Didn't have full PowerPoint presentation handouts
- Missed Gary, Phil, Arn, Jeff
- Singing Facilitator
- More analogies (!)



## **DRAFT AGENDA FOR NEXT ARG MEETING**

**June 6, 2006 at Mountlake Terrace**

**9:00 a.m. - 3:00 p.m.**

1. Welcome, review notes, action items, agenda
2. Fish Facilities Operational Topics (TBD)
3. A-09 Instream Flow Report
4. Hatchery/Fish Propagation Facilities Update
5. FSC/ Fish Passage Update
6. BRICC/FERC DEIS update
7. Relicense Studies Update
8. Evaluate meeting, set next meeting (Sept. 12, 2006) agenda & location