
BAKER RIVER PROJECT RELICENSE

Aquatic Resources Group

January 10, 2006

9:00 a.m. – 2:00 p.m.

USFS Supervisor's Office

21905 64th Avenue W

Mountlake Terrace, WA

(425) 775-9702

Conference Call Procedures-Dial In Info :

1-866-297-7238 (toll free number)-Dial in at the designated date and time –

Conference ID: 278284

Conference Password: 2685

DRAFT AGENDA

1. Review Agenda, Notes, Actions	9:00 – 9:15
2. Fish Facilities Operations Topics <ul style="list-style-type: none">• Sockeye Spawning Beach & Artificial Incubation Operations• Fish Rearing Inventories & Releases• Adult Trap Protocol Update or Changes• Imprinting/Release Sites for Chinook study	9:15 – 10:30
<i>Break at 10:30</i>	
3. Update on Early Implementation Activities <ul style="list-style-type: none">• Fish Propagation Facilities• Fish Passage Technical WG Report	10:45 - 11:30
<i>Lunch (provided)</i>	
4. Relicense Studies Update <ul style="list-style-type: none">• A-38 Native Char Investigations (prelim. 2005 field results)• A-09 Instream Flow (draft report progress update)	12:00 - 1:30
5. BRICC/FERC DEIS Update	1:30 - 1:45
6. Confirm Date (March 14) & Agenda for Next Meeting, Evaluate the Meeting	1:45 - 2:00

Baker River Project License Implementation

Aquatics Resource Group Meeting Final Meeting Notes

January 10, 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, Doug Koens, Doug Bruland, and Nick Verretto (PSE); Phil Hilgert (R2 Resource Consultants); Steve Fransen (NOAA Fisheries); Stan Walsh (SRSC); Jeff McGowan (Skagit County); Rich Johnson by phone, Mike Muller, Ted Thygesen, Gary Sprague, Jed Varney, and Kevin Kurras (WDFW); Scott Lentz (USFS); Jon-Paul Shannahan and Scott Schuyler (Upper Skagit Indian Tribe); Lou Ellyn Jones (USFWS); Arn Thoreen (Skagit Fisheries); Alison Evans (Dept. of Ecology); Bob Helton (Citizen); Stan Zyskowski (NPS); Lyn Wiltse, facilitator, and Jamie Riche, note-taker (PDSA Consulting, Inc).

NEXT MEETING DATES

March 14, 2006, 9:00 – 3:00, ARG (USFS, Mountlake Terrace)

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

***September 12, 2006, 9:00 – 3:00, ARG (location TBD)**

QUOTABLE QUOTES

“... intoxicated with the exuberance of your own verbosity.” – Cary Feldmann

“... well, I think fish are amazing creatures.” – Phil Hilgert

AGENDA TOPICS

9:00 – 9:15 Review Notes, Agenda

9:15 – 10:30 Fish Facilities Operations Topics

- Sockeye Spawning Beach & Artificial Incubation Operations
- Fish Rearing Inventories & Releases

- Adult Trap Protocol / Changes and Imprinting / Release Sites for Chinook study

10:30 – 10:45 Break
 10:45 – 11:30 Update on Early Implementation Activities (Fish Propagation & Fish Passage)
 11:30 – 12:00 *Lunch (provided)*
 12:00 – 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 (March 14) & agenda for next meeting; evaluate meeting

NEW ACTION ITEMS

- Stan Z – Send Arnie link to for Frasier Radio Tag study. (DONE!)
- Stan W – Work with Scott S. and other co-managers to review artificial incubation planting numbers and get answer to Kevin by Feb. 10.
- Stan W – Give an update on our discussion re: the acclimation problem in the adult trap to the Chinook indicator stock group, and bring their input back to the next meeting.
- Doug B – Start tracking the zero age sockeye fry ... and let the fish go :)
- Arnie – Ask Kevin to email handouts early when possible.
- Cary – Work with Arnie to find a way to summarize BRC activities for the rest (BRC 101).

OLD ACTION ITEMS

- Jed – Look at adult pond designs (*this review has begun with the group looking at round vs. square designs, the group has not yet developed a suggestion*)
- All – Review the Attendee List to ensure your organization has a designated primary and back-up representative listed
- Gary – Come up with directive to handle brook trout, coordinate with other co-managers and bring back to the group
- Gary – Pulled together a research paper on sockeye juvenile survival related to size (*see handout "Proceedings of the 1989 Alaska Sockeye Culture Workshop"*)

FISH FACILITIES OPERATIONAL TOPICS

Fish Rearing Inventories & Releases

Doug Bruland walked us through the fish rearing/release data (see the 'Baker River Fish Inventory' handout), including the numbers and locations of Sockeye, Coho, and Rainbow. PSE will start freeze-branding the hatchery coho (raceway #1) and sockeye (circular #5) next week to repeat the mark-recapture study this spring. PSE will also conduct biological testing this spring at Upper Baker utilizing approx. 2,600 of the remaining hatchery-origin coho (raceway 2). The rainbow (~ 20,000) have been moved into the trout pond in advance of the Troutfest Derby and other charity events hosted by PSE.

Artificial Incubation Operations & Sockeye Spawning Beach

We discussed the allocation of artificial incubation Sockeye planting numbers to the two reservoirs: Baker and Shannon, and confirmed a split of 70% to Baker and 30% (not to exceed 300,000) to Shannon. Baker fish are delivered first to look for a possible IHN outbreak. The agreements regarding this topic were made years ago and need to be revisited in light of current conditions. The co-managers will review the artificial incubation planting numbers policy.

Kevin Kurras walked us through the 'draft (preliminary) Incubation Worksheet' handout. They achieved

939,000 eyed-eggs from the incubation program and overall egg loss is currently just 7 percent. Typically, some of the earlier egg takes suffer higher losses. Next year, Kevin's group will be changing the spawning/incubation protocol by increasing contact time and adding a saline solution to the water the eggs are fertilized in, which should be a benefit to egg fertilization and survival. He will have a finalized report on the Incubation Worksheet data at the next meeting in March.

With the recently heavy and prolonged rains (24 consecutive days, and rainfall well above average), Kevin reported the intake at Beach 4 has been unstable. There have been several turbidity alarms and the procedures for response have been followed. However, the hillside above the intake continues to slough, some silt has been observed in the trout pond and Kevin is concerned about the hits of turbidity we are taking. *(Following this meeting, they prepared to switch to the alternate water source tied into the Depression Lake overflow channel, however the turbidity spikes have passed and the accumulation of sediments in the trout pond were in fact minor- they remain on the Sulphur Springs water supply which is presently clear. They have also adjusted the turbidity notification alarm threshold upward from 30 NTUs - which is an insignificant level of turbidity detection to 50 NTUs - a more representative level for alarm notification).*

Kevin reported at the end of the spawning season, when they emptied the beach, they were able to spawn an additional 37 more females. From the adult sockeye recoveries for the 2005 brood year, he reported a season total of 194 marked fish (those with adipose clips that originated from the delayed release program).

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

Kevin walked us through the 'Baker River CWT (coded wire tag) Info' handout. After Oct. 10, they sampled every 10th Chinook because Marblemount Hatchery no longer needed fish.

The group discussed the juvenile Chinook from the acclimation study (of last summer) that aren't leaving the trap. When the water is lower, the fish can't make it over the top. Since spilling has been happening at Baker, it is unlikely that PSE would be able to take an outage to evacuate the trap. Even if we took an outage, we would still have to bucket them out and wouldn't be able to get them all. The group discussed that the use of buckets would defeat the purpose of de-stressing the fish.

A temporary raceway was discussed as another option. This would require an alarmed water source. Putting fish in the river above the weir would be preferable to using the trap. Timing and feeding issues are a concern. Question to consider: When do the hatchery fish smolt (compared to wild fish)?

FYI: There is 2-3 week outage planned for the beginning of April. The flow continuation valve will be providing 80 cfs (plus leakage). Is the best chance of imprinting at the tailrace? Could we set up a net pen or holding facility in the tailrace during the outage, then "flush them out" when start to generate? Stan W. will give an update on our discussion re: the acclimation problem in the adult trap to the Chinook indicator stock group, then bring their input back to us at the next meeting.

WATER QUALITY CERTIFICATION

Alison reported that the Water Quality Certification is available online for public review; comments are welcome and due by January 27th.

UPDATE ON EARLY IMPLEMENTATION ACTIVITIES

Fish Passage TWG

Nick Verretto reported that the FSC design continues; the adult trap is being designed to the 15% level; the biological performance evaluation for the FSC is being formulated and studies are being conducted this year in advance of the FSC's installation at Upper Baker in March of 2008.

The Lower Baker FSC will be installed 4 years later, with lessons learned from the Upper Baker installation integrated. PSE had a design level of 45-50% on the FSC as of last June, which was put on hold due to significantly escalating costs (see notes from earlier meetings). The current design is significantly smaller through adjustments of the engineering assumptions and criteria. Nick walked us through the FSC Design Comparison (6/10/05 – 10/25/05), including design adjustments and rationale. The major differences are a decrease in the primary screen size, a significant decrease in the size of the secondary screens, a decrease in the capture velocity (from 8 to 7 ft./second), and a reduction in the capture area. Agency folks are most nervous about the reduced capture area (from 9 sq. ft. to 3.75 sq. ft.)

Nick reported that there are multiple contractors and subcontractors involved in the various design elements: Washington Group is designing the FSC, and Westmar (out of Kirkland) is designing the Net Transition Structure and the modifications of the log boom.

Nick also reported that PSE will be releasing six separate weekly batches of 125 pit-tagged fish above the FSC to study the recapture rate in an attempt to distinguish the rate of return of native fish. The next meetings of the Fish Passage TWG are January 31 and March 21.

Fish Propagation Facilities

At the last meeting, PSE's contractors shared some initial looks for the hatchery design and gathered feedback to incorporate. Arnie, the contractors and some agency folks met to review design alternatives and operations, and to discuss design criteria. Work continues with HDR. Arnie reported that this group will have a more in-depth report for the next meeting.

LICENSE STUDIES UPDATE

A-38 Native Char (2005 Field Results)

Phil Hilgert (R2) updated us on the Native Char Field Study activities since our last meeting. He reported that there were surveys on Nov. 23rd, 30th, and a night survey on Dec. 13th. Interestingly, some fish were found to be actively spawning. Since they found fish during the Dec. 13th survey, they went out one more time on Dec. 16th.

He walked the group through the 'Native Char Investigations at the Baker River Hydroelectric Project' handout, pointing out that the group again saw two influxes of fish, one in September and one in late October / early November. He highlighted a correlation between a drop in water temperature and an influx of fish. While the data show an interesting correlation, he was careful to state that cause and effect have not been established. We should keep this in mind as we get closer to the connectivity issue (Article 104). Studies continue in order to better understand the system.

In summary, we are learning. We have the tissue samples and are waiting to get them analyzed. *In*

response to a suggestion from Scott Lentz, R2 will include air temperature and flow data with the 2005 survey results. For 2006, R2 will develop a study plan with *USFWS and other interested parties.* They will be looking to see if there is that same bi-modal distribution of upstream migration in Sulphur Creek.

Middle Skagit River Salmon Spawning Surveys

Phil walked the group through the 'Middle Skagit River Salmon Spawning Survey' handout, showing mean daily flows and water clarity for the surveys conducted. For 2005, R2 observed Chinook through aerial surveys and measured them through jet boat surveys. They found that the Chinook dropped off by mid Oct. / early Nov. By Nov. 18, there were no more fresh Chinook carcasses, which indicated an end to the spawning. The number of measured Chinook redds at the Middle Skagit were lower in 2005 than in previous *non-pink* salmon return years; *if the pattern holds*, we can anticipate an increased return next year. All the information in the handouts, along with additional information, will be posted to the website for your review. Let Arnie know if you would prefer to have it emailed to you as a PDF file.

BRICC UPDATE

Nothing new here. 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. FERC now says the DEIS will be out by the end of January. The next BRICC meeting is tentatively scheduled for February 14. The purpose of that meeting will be to walk through the DEIS and formulate initial comments. Keep staying tuned.

HANDOUTS

- Agenda & Notes
- Spawning Beach Update
- Baker River Trap CWT Info
- Adult Recoveries Brood Year 2005 Baker Sockeye
- Incubation Worksheet
- Baker Project Fish Inventory
- Native Char Investigations at the Baker River Hydroelectric Project
- Proceedings of the 1989 Alaska Sockeye Culture Workshop

MEETING EVALUATION

What Went Well

- Got out early
- Rich on phone
- Good crowd
- Keep including Ops Mtg.
- ARG folks appreciate Ops folks' patience

What to Do Differently

- ARG folks would appreciate more context for BRC topics
- Chuck's finger surgery ... barnacle news?
- Room too warm
- We NEEDED deviled eggs!
- Mudslide on I-5

- Review draft norms with whole group

AGENDA FOR NEXT ARG MEETING

March 14, 2006 at Mountlake Terrace

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

1. Welcome, review notes, action items, agenda
2. Review Norms with the Ops Folks
3. Fish Facilities Operational Topics
4. BRICC/FERC DEIS update
5. Early Implementation Activities Update (Fish Passage/Fish Propagation Facilities)
6. Relicense Studies Update
7. Evaluate meeting, set next meeting (June 6, 2006) agenda