
BAKER RIVER PROJECT RELICENSE

Aquatic Resources Group

September 9, 2008 (9:00 a.m. - 2:00 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. Review notes/agenda/action items from June 10th, 2008 meeting	9:00 - 9:30
2. Review recent BRICC meeting activities, licensing updates?	9:30 – 10:00
3. Decisions Required at Today's meeting (Detailed information Attached (if needed)) None [this is a placeholder for license implementation level decisions]	
4. Brief Updates Fish Facilities Operations Topics <ul style="list-style-type: none">• Downstream Fish Passage Facilities (PSE-Bruland)• Sockeye Spawning Beach and AI Operations (WDFW/PSE)• Fish Rearing Inventories & Releases (PSE-Bruland)• Adult Trap Protocol Update or Changes <i>Break at 10:30</i>	10:00 – 11:00
5. Hatchery Update - Design changes since 90% submittal	11:00 – 12:00
6. FPTWG Update <i>Lunch Provided at 12:00</i>	12:30 - 1:00
7. Other License Implementation Planning	1:00 - 1:45
8. Evaluate meeting, set agenda for next meeting (October 14 th , 2008 at Mill Creek	1:45 – 2:00

Baker River Project License Implementation

Aquatics Resource Group Meeting Final Meeting Notes

September 09, 2008 ~ 9 am - 3 pm

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

PRESENT

Arnie Aspelund, Cary Feldmann, Doug Bruland, Dave Jenness, Nick Verretto, Ginette Lacasse (PSE); Ted Thygesen, Jed Varney, Rich Johnson, Brett Barkdull, and Kevin Kurras (WDFW); Stan Walsh (SRSC); Phil Hilgert (R2); Mort McMillen and Chris Boyd (McMillen Engineering); Bob Helton (Citizen); Lyn Wiltse and Becky Molander (PDSA Consulting, Inc.).

FUTURE ARG MEETINGS

2008: Second Tuesday of each month (*except Nov. mtg. is on a Thurs*): Oct. 14, Nov. 13, Dec. 9

2009: Jan. 13, Feb. 10, Mar. 10, Apr. 14, May 12, June 9, July 14, Aug. 11, Sept. 8, Oct. 13,
Nov. 10, Dec. 8

Default Location: WDFW Mill Creek, WA

NEW ACTION ITEMS

- Doug: Enumerate number of sub-yearlings, verify if they are zeros and analyze length data accordingly.
- Doug: Encourage techs to send comments to WDFW re: fish trap protocol.
- Brett: Set up meeting with co-managers (Bob Hayman, John-Paul, etc.) to address issue of holding early returns for lake plants of sockeye adults.
- Doug: Make sure big circulars (at least one) will be available during the construction season.

PREVIOUS, STILL RELEVANT, ACTION ITEMS

- Arnie: Schedule a reliability / Mid-Columbia study / climate change dialogue for an upcoming ARG meeting.
- Arnie: After the summer field season, bring together smolt capacity study teamlet (Arnie, Stan, R2).
- Jed: Follow up with Scott Lentz re. Beach 3 release sites.

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- Rich: Continue working with Co-Managers re: release sites beyond Beach 3.

BRICC / LICENSE UPDATE

Cary Feldmann reported on the first video-conference call with locations in Bellevue, Tacoma, and Burlington for the July meeting. Other than some audio problems at the Tacoma location, the trial went well. The updated version of the decision-making protocol was reviewed at the meeting.

FERC has received the Bi-Op from NMFS. Paul Wetherbee will be contacting them re: the schedule for issuing the license. We are anticipating getting the license by the end of October. In the meantime, resource groups are meeting regularly in anticipation of receiving the license then. Once the license is issued, there is a 30-day appeal period for us to compare it to the settlement agreement and ensure our interests are preserved. Participants have the option to appeal parts of or the whole license or to request a stay.

With the strength of 4(e) conditions demonstrated with Cushman, we are cautiously optimistic that the terms of the settlement agreement will be represented in the license.

Participants were encouraged to get on FERC's email notification list. PSE will also keep participants informed of the notifications they receive.

DOWNSTREAM FISH PASSAGE FACILITIES

The following updates were based upon several table handouts that were provided. Doug reviewed the 2008 numbers for the Upper Baker juvenile trap. There were 18,575 juvenile Coho. This was the lowest number since 1987. This was still pretty good considering these are progeny from a low Coho return (965) in 2006.

There were 209,000 unmarked sockeye. This was second largest number ever. There were 46,000 marked sockeye, bringing the total sockeye to 255,000. This was the second largest ever (the largest occurred in 2006).

There was some discussion about the emergence of "smaller" (estimated around 90 mm) juvenile sockeye smolts at the trap during the tail end of the outmigration season and whether or not these fish are sub-yearlings. Going forward we will enumerate and collect scales and lengths from these fish.

There was a 60% recovery of Coho marked recapture groups – this was pretty good, with the new FSC. Doug reported we had low recovery at Lower Baker. *He also reported net damage was found on the Lower Baker gidenets which have since been remedied. He did not know of the duration and timing of the damage or the impact it may have had on the recapture.*

The Sockeye Reservoir Migration Study showed a 74.8% recovery of the "backwards C" branded fish. This has the highest percentage on record.

There was an 80% recovery of ad-clipped fish – some of those were pit tagged. These numbers will be adjusted when R2 Consultants finishes their analysis of the study. Doug estimates the final number will be

about 76%.

Since the season is over the FSC has been taken out of service and we are in the process of completing work in it that had been deferred (e.g., painting). We are also performing other modifications and improvements with hopes of finishing before the start of the rainy season. The recovery rate and our ability to sample has already been much improved with FSC, and should improve even further.

SOCKEYE SPAWNING BEACH AND ARTIFICIAL INCUBATION OPS

Kevin reported we didn't quite reach our expected loading goal to the Spawning Beach and AI program this year. We were approximately 61% of the goal. But Kevin is optimistic that we will be alright with numbers of fry from the AI program.

Everything else is going well. We will be putting together spawning supplies next week. All were asked to be prepared to discuss emptying strategies for the beach and what to do with counters at our November meeting. *The adult sockeye returns to Baker Lake and Lake Washington were 400% lower than pre-season forecasts, apparently as a result of extremely poor ocean survival conditions, especially for the smolts. The Fraser River runs were also very poor, but in contrast, the Columbia River sockeye run was very good.* We will take standard IHN and otolith samples of adults according to the protocol.

We discussed how we might want to hold early returning fish at the ponds, ear-marked for allocation to Baker Lake while the prognosis of the run is evaluated, in case the run falls short of expectation. The co-managers will set up a meeting to address the strategy for lake plants of Baker sockeye adults.

FISH REARING INVENTORIES AND RELEASES

Doug referred to the inventory handout for the following rearing program census. Doug explained that currently Raceway 1 contains 65,000 sockeye. We will soon finish sockeye ad-clipping and move on to Coho. We will hold some for the biological evaluation study. The fall release group had high survival. Approximately 50,000 will be released in November when water temperatures drop sufficiently. We will take 100 scales and lengths prior to releasing them. We will discuss this further at our October meeting.

Other highlights of his report:

- Trout pond - 797 brood stock
- Small circulars – 3 groups of Rainbow from the Arlington Hatchery.
- There are 9 Coho brood stock in the large circular #3.
- We will start spawning them in mid-November and will also use circular #4 for that.
- The goal for adult Coho broodstock is 200.

CHANGES TO ADULT TRAP PROTOCOL

- No changes for Coho/sockeye
- Chinook – unmarked, no CWT (wild fish) protocol remains the same.
- August 16-Sept. 1 will operculum punch
- Sept. 25 – will start taking fish for brood stock purposes. Will take one out of every two wild fish for brood stock – operculum punch them and return to river.

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- Chinook unmarked and CWT no changes.
 - Chinook ad-clipped and CWT fish will do DNA sampling – will take 20% for brood stock.
 - We will continue to sample 20% for CWTs to get a better distribution throughout the run.
 - Natural run Steelhead (combining summer and winter runs) – no changes.
 - Hatchery run Steelhead combined to a single column – no changes.
 - No protocol changes for other species.
 - Native char – development of future protocol is in progress.

HATCHERY DESIGN UPDATE

Dave Jenness explained that we are in the process of finalizing 100% design which will be submitted on September 22. We will do a 100% design review at our October 14th ARG meeting. October 20 will be the PSE Internal Design review meeting. Next phase: Signed, stamped drawings. We are in the permitting process with Whatcom County. We are anticipating getting the license the end of October. Weather permitting, we will start site grading in March of 2009.

Mort McMillen walked us through an overview of the changes made since the 90% design review:

- Truck loading location was changed
- Able to keep 2 of the 3 circulars and all of the vinyl raceways
- Roof was extended on hatchery
- Moved location of storage buildings

They are currently adding a lot of detail that typically gets overlooked in construction including where electrical panels are, how all the piping works, etc.

Submittal Includes

- Design drawings
- Tech specs
- DDR Report
- Appendices A-K
- Revised Design Criteria Package in Appendix A
- Responses to comments in Appendix J (responses to all 1300 comments received – incorporated 1200 of these into the new design)

After getting the license, will incorporate any additional permit conditions and then be ready to go to construction.

Schedule Highlights

- Mobilize - Feb 2009
- Start construction – Mar 2009
- First shutdown May 2009
- Main hatchery construction June 2009 to Mar 2010
- Main hatchery testing Mar – Apr 2010
- Second shut down May 2010

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- Spawning Beach Modifications – June – November 2010
 - Construction complete November 2010

2 Issues from Meetings with WDFW

1. Formalin (suggested changes were incorporated)
2. AI holding spawning design – layout of the spawning facility – looking at Issaquah hatchery
 - 14% reduction in holding volume if incorporate Issaquah design
 - Slope floor and lower water depth in spawning area

Mort showed pictures of the Issaquah hatchery operation and explained the main differences in this design and what we have planned for Baker.

3 Alternatives considered and evaluated:

1. Maintain AI holding spawning design as per DCP
2. Adopt Issaquah Hatchery Layout – matching existing water surface
3. Adopt Issaquah Hatchery Layout – match finish grade

The most labor-intensive part of a hatchery is spawning. WDFW is looking at doing everything possible to make this process easy and convenient.

How much free-board do we need for jump prevention – 3 or 4 feet? Inflow is from the floor, so they wouldn't typically be jumping anyway. People seemed to feel that 3 feet would be sufficient.

Mort outlined the pros and cons of 3 different alternatives that came out of WDFW's suggestion that we incorporate the sloped floor design of the Issaquah hatchery. This should result in less O&M cost. Jed reported his observation at Issaquah that fish don't seem to be influenced by the sloped floor and have held in the 3' shallow end. He believes the impact of incorporating the Issaquah design should not be problematic to the fish.

Response to ARG Comments

Mort summarized his responses to the following comments from the ARG

- Complete additional evaluation ensuring storm water does not enter the ponds – addressed.
- Add windows to provide natural light in the hatchery building – windows were added to the extent possible.
- Provide screen slots in the adult pond to facilitate fry rearing – done.
- Provide smooth ramp in the spawning beach banks to facilitate capture and removal of adults – done.

Next Steps: Cost out the 3 alternatives from construction and O&M perspectives. There seems to be consensus to incorporate the Issaquah Hatchery sloped floor alternatives. We will continue to look at other implications / unintended consequences of this proposed design change.

FISH PASSAGE TECHNICAL WORKING GROUP UPDATE

We viewed the part 1 and 2 FSC movies that depicted the development of the FSC and the completion of facilities for collection, sampling and transportation/fish release into the overall story. Nick reported that the FPTWG will resume meeting again September 26 and will be reviewing the FSC performance evaluation study results and developing the 2009 study as well.

PSE has initiated in-house discussions for the Lower Baker FSC to be operational in 2012. The design of this FSC will also be discussed as will connectivity and the schedule for the adult trap.

Post-season work is now being done on Upper Baker FSC.

We will discuss FSC performance at our October meeting.

Anyone interested in attending the September 26 FPTWG (at SEATAC) meeting should let Nick know so he can provide necessary information.

OTHER LICENSE IMPLEMENTATION ACTIVITIES

Arnie reviewed briefly the proposed plan format for FERC reporting. The idea is to keep decisions at the appropriate local level. FERC would approve the processes and be informed later about the actual actions. This standardized template would be used for plans across all working groups (with the exception of CRAG). Draft reports will be reviewed periodically at these meetings.

We have initiated Middle Skagit spawning surveys in accordance with the Interim Protection Plan. Phil announced that they plan on flying Thursday, Sept. 11, and doing a jet boat survey the following day. We look forward to reviewing the end-of-the-year report.

Phil reported that native char tissue samples from past studies are currently being analyzed at the WDFW genetics center. There was great rejoicing.

We are planning for two more years of study on connectivity between Lake Shannon and Baker Lake.

Terrestrial Activities

TRIG elk habitat acquisition – Cary reported that PSE has made an offer on a parcel. The land acquisition teamlet is still putting together the protocol to guide acquisitions.

Smolt Capacity Study

Arnie reported that the teamlet for the smolt capacity study will be convening shortly and we will get an update at our October meeting.

MEETING EVALUATION

Well Done:

- Got out early!
- Everything went well, wouldn't change a thing!
- No decisions required – so OK that we didn't have a quorum

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- Face-to-face dialogue

Do Differently Next Time:

- Have a quorum
- Limit Construction noise

HANDOUTS

- Agenda, Notes, 2008-2009 Meeting Schedule
- ARG Representative List
- 2008 Upper and Lower Baker Juvenile Trap Data
- Baker Juvenile Sockeye Outmigration by day 2001-2008 (graph)
- Baker Sockeye Outmigration Run Timing (graph)
- 2008 UB Smolt Timing (graph)
- 2008 Sockeye Spawning Beach Loadings
- 2008 Chinook CWT Recovery and Data
- 2008 Baker Project Fish Inventory
- PSE Salmon and Trout Release Records
- PSE Trout Release Records
- Baker River Adult Fish Returns– Season June 2008-May 2009 Season Totals
- Baker Adult Fish Trap Protocol – Revised September 2, 2008
- Baker River Hydroelectric Project FERC No. 2150 – Draft Management Plan – July 22, 2008

AGENDA FOR NEXT ARG MEETING (more later –stay tuned)

October 14, 2008; WDFW-Mill Creek office

1. Welcome, review notes, action items, agenda
2. Operations (morning)
3. 100% Design Review of Hatchery
4. Report from the FPTWG
5. Other implementation updates
6. Evaluate meeting, set next meeting agenda & location