



## *Baker River Project License Implementation* **Aquatic Resources Group**

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

### **PRESENT**

Arnie Aspelund, Doug Bruland, Nick Verretto, Jory Oppenheimer, Cary Feldmann, Jacob Venard, and Scott Williams (PSE); Robert Franklin (Sauk-Suiattle Indian Tribe), Stan Walsh (SRSC); Steve Fransen (NMFS); Greta Movassaghi and Jeremy Gilman (USFS); Kevin Kurras and Brock Applegate (WDFW); Jon-Paul Shannahan (Upper Skagit Tribe); Tom Van Gelder (Trout Unlimited); Chuck Ebel (USACE); Lyn Wiltse (facilitator, PDSA Consulting).

**DECISIONS** – none today.

**ARG MEETING DATES:** Assume Tuesdays, alternating in-person and phone/web meetings:

Mar. 13 at Skagit Service Center, combined with ARHWG (ARG-TRIG 505) Meeting, April 10 at Skagit Service Center combined with BRCC Meeting, Apr. 11 (FPTWG meeting at PSE LB Office in Concrete with field trip), May 8, June 12, July 10, Aug. 14, Sept. 11, Oct. 9, Nov. 13, Dec. 11.

**Website:** You can find Baker River documents available to the resource groups such as resource group plans, reports, meeting notes, etc., via PSE.com:

<http://pse.com/aboutpse/HydroLicensing/Pages/Baker-River-Licensing.aspx>

### **ACTION ITEMS**

- All Let Nick know if you plan to attend Apr. 11 field trips of the gulper and LB FSC construction. Arrive by 1 pm and wear sturdy shoes with good ankle support. PSE will provide hard hats, vests, and safety glasses
- Arnie Send out pdf of October, 1960 paper describing the history of the gulper along with these meeting notes.
- Arnie Send out letter sent to Jacob regarding ARHWG proposal process along with these meeting notes.
- Cary Create and disseminate single schedule that spans all Baker License Implementation Resource Groups.
- Cary Send out finalized report on repairs made and lessons learned for Upstream Fish Trap.
- Jacob Send reminder of February 15 proposal deadline to ARG and TRIG members. *(Done)*
- Jacob Send out draft of response to letter regarding hedgegrow proposal to ARG and TRIG members for review before sending response to initiators.
- Stan Coordinate Upper Baker FSC sub-sampling with Rebecca and Brett and then coordinate with Nick no later than April 21<sup>st</sup>.

### **PREVIOUS - STILL RELEVANT - ACTION ITEMS**

- Co-Mgrs Send a draft Fish Production Plan to Arnie ASAP, as per FPPF. (co-managers reported still making progress, they have been meeting.)
- All Review / update the ARG representation list for your organization (ongoing)

## **ANNOUNCEMENTS / SAFETY MINUTE**

- It's Saint Valentine's Day and American Heart Month. The safety minute included acknowledging importance of steps and lifestyle choices to be heart-healthy.

## **BRCC UPDATE**

On February 1, Cary emailed out his monthly report on Resource Group license implementation activities to the BRCC. In this email he announced a move to April 10<sup>th</sup> for the next in-person BRCC meeting. The date change was in response to requests by members who were unable to attend on the 25<sup>th</sup>. The meeting will be combined with the ARG meeting at the PSE Skagit Service Center. The fourth Wednesdays will continue to be reserved throughout 2012 for BRCC conference calls as needed.

Updates from other Resource Groups:

- The TRIG is developing management plans and schedules for the two recently purchased properties.
- The RRG is meeting next week in a combined meeting with the Law Enforcement Plan Team. They will be planning for the upcoming season.
- The CRAG is meeting February 15 regarding the Lower Baker Dam crest improvement project and how it relates to the historic effects of the dam. They are anticipating a "no adverse effect" with those changes. They will also be reviewing the 2012 schedule of activities.

PSE recently sent out a CD with all annual reports to all Baker License Resource Groups. Comments are due March 1, 2012. New annual reports included on the CD are 102, 201, 501 and 601. The plan is to send to FERC April 30, 2012.

## **UPDATE ON BAKER FISH HATCHERY OPERATIONS**

Kevin explained that incubation at the hatchery is going well. A flow issue contributing to fungus in some of the early developing sockeye egg incubation trays (where some egg & alevin losses occurred) has been resolved. They are making sure the losses weren't IHN related.

The coho egg incubation is going great. At the spawning beach, they are starting to see a few fry. There are no premature swim-ups, or indications of IHN in the spawning beaches. We will be sampling fry immediately upon immergence. The counters are installed and ready in each section and at the collection hopper.

During the week of February 6, Jed, Doug and Kevin discussed how to make the AI ponds more fry friendly should they have an exceptionally large take to hold. They decided to install a 1' x 1' sliding gate at the bottom of the fry screens that will allow them to lower the water level and transfer fry as necessary to accommodate large numbers. By modifying the screens in the AI ponds, they will have all the room they need. These plans will be implemented for next year. This year, they have a plan worked out to hold the fry two weeks before releasing.

Doug mentioned that some improvements have been made to the chlorine pumping system (replaced the vented lids) to ensure safety. A PSE Safety Department representative is currently evaluating the ventilation system and the procedure to make sure it complies with safety standards.

## **DECOMMISSIONING OF SPAWNING BEACHES 1-3**

Scott reported that contractor interviews are complete and they have selected Anchor QEA. Tracey Drury will be the Project Manager. Several ARG members mentioned that they are familiar and satisfied with the work of this firm which has offices in Bellingham and in Seattle. PSE is in the process of getting them under contract. It is anticipated that Anchor will begin doing field work as soon as the snow clears. The initial work product of a 30% conceptual design anticipated to be ready for ARG review in several months. This conceptual plan will be based on the Scope of Work prepared by the USFS last spring.

This is Scott's last meeting with us as he has accepted a position with PSE's Energy Efficiency Group. We appreciate the work he has done to support ARG activities and wish him well in his new role.

#### **UPDATE ON LOWER BAKER FSC CONSTRUCTION**

Nick reviewed Lower Baker FSC construction progress, sharing reports and photos of the access area, pier and bench work adjacent to the existing gulper, FSC field assembly and shop work, NTS assembly & fit-up, and mooring anchors work. There has been no change to the schedule. ARG members are invited to attend the launch of the new FSC which Nick in which is still scheduled to occur mid-June 2012. March 1, 2013 is the scheduled start-up date for the Lower Baker FSC.

The Lower Baker guide net will be deployed the week of February 21. Doug discussed the revised location of the east leg of the guide net to stay clear of the pier work, which includes core drilling and blasting for pier columns. The new anchor point is on the downstream end of the bench near the two standing snags, so will create a slightly negative angle to the gulper entrance this year. Accommodations will be made with the new power line in that area to avoid interference. They will be inspecting the net upon deployment, as the reservoir elevation rises, and throughout the season. When they deploy it and cut the lines, they will be monitoring and checking the net as the reservoir goes up. Bathymetry along the new alignment is similar to the existing (i.e., along the nearly vertical bank), so shouldn't create gaps or increase exposure to additional submerged snags or stumps.

The FSC superstructure is nearly complete. The NTS attachment section has been pre-fit and slight modifications made to ensure proper mating. The NTS is now being assembled on the support frame. Drilling from floating platforms is underway for the mooring anchors (similar in design to those used at the Upper Baker FSC).

Photos of the new FSC screen baffles showed the rectangular holes that allow for even adjustment of flow. The old design used circular holes which created a non-linear flow adjustment. The new design also has increased bracing on the back side of the screens, as well as uses two different materials for the two plates (UHMW and aluminum). The screens and baffles should all be in place in April during our field trip so we should be able to see them in action.

Nick previewed the planned agenda for the next FPTWG agenda (Apr. 11) which will include the following:

- Lower Baker FSC Construction update, 2012 releases, 2013 study plan and 2009 acoustic study report
- Upper Baker FSC 2011 study report, net replacement, ops coordination and sub-sampling plan, and stress relief ponds protocol
- 104-connectivity annual update
- Lower Baker gulper (last chance!) and FSC site visit starting around 1:00.

The Lower Baker start-up study will focus on flow preference followed by performance studies the following two years. We have 20 years of general data with a broad range of recovery rates. Plans now include gathering some baseline PIT tag information at Lower Baker for comparison with the new FSC. The study plan indicates two downstream release sites and one upstream adjacent to the freeze brand group release site. PIT tagging of 6K fish will occur Feb 27-29 at the new hatchery. Releases of 1K coho and 1K sockeye will occur at each of the three sites, the upstream site concurrent with the freeze-brand groups so we can evaluate them against the PIT tagged groups, and the two downstream sites just prior to the front end of the peak outmigration window, similar to the timing at Upper Baker. Recovery data from the downstream groups will be used to identify the best release site for future performance studies and to assess performance of the gulper against the new FSC (the releases will be repeated in 2013 to supplement the flow preference study information). The downstream releases will help establish a linkage to the legacy freeze brand data.

The 2011 Upper Baker study report will be out by the end of February. The final version will be reviewed at the April meeting. The 2013 Lower Baker study plan will be out for review soon, as will the revised 2012 Lower Baker study and 2009 Lower Baker acoustic study report.

The new net design for Upper Baker is nearly complete. Plans are to hire a fabricator to do the work and a separate contractor to do the installation in late fall (before the reservoir drops to low pool). After removing the old net in August, there will be a 2-week period without nets. These 2 weeks may stretch to 6 weeks if the decision is made to salvage some parts of the old net. Nick will keep everyone posted.

Nick also explained plans to pluck some stumps that are in the way of the netting, causing issues with the net as elevations change. The targeted stumps are on the right bank, well below the high pool vegetated zone.

Sub-sampling: We are coordinating this with Stan, who is consulting with Rebecca and Brett. We need to be in agreement about how to proceed by third week of April so PSE can get everyone trained and comfortable with the protocol.

## **HATCHERY OPERATIONS**

### **Fish Inventory:**

The total juvenile fish inventory is just above 90,000.

In Raceway 1: 3,000 of the nearly 6,000 sockeye will be PIT tagged for biological studies in Lake Shannon. In Raceway 3: 3,000 of the 44,000 coho will be PIT tagged for biological studies in Lake Shannon. The remaining coho will be released in the spring to the Skagit River.

Freeze-branding was completed last month (coho and sockeye) and these fish (20,600) are being held in Circulars 1-4, of about 5,000 fish in each, for mid-April releases. The sockeye and two groups of coho will be released into Baker Lake. The other group of coho will be released into Lake Shannon.

Rainbow trout (19,700) are currently being held in four circulars. The Upper Skagit Tribe will be taking some in April. PSE will be taking some for their derby as well. The rest will go into Depression Lake.

Coho Incubation: Spawning is complete. These fish have been shocked and picked with only a 3.7% loss. This is a good demonstration of success in the new incubation room for the 20K program. We will be putting these fish in swim-up troughs in the hatchery building and then moving them outside. The fry feed has been received. The coho fry will be released to Lake Shannon. We will retain about 65,000 status quo for experimental groups next year, and extended rearing.

Incubation Worksheet for Broodyear 2011:

Sockeye green eggs = 5.3 million; Sockeye eyed eggs = 5.1 million

Coho estimated green eggs = 190,000; Coho estimated eyed eggs = 173,000

## **FISH FACILITIES OPERATIONS UPDATES**

The Upper Baker FSC should be ballasted and put in position this week. Power should be to the Lower Baker gulper by next week. Both will be online by March 1.

Upstream Fish Trap: It looks like we made it through the fall migration. The trap was sampled on Monday and there was nothing. PSE is checking the trap now three days a week. During the sockeye season there were some repairs made to the trap. A little trap door was installed so fish trapped under the rail could be released. It also serves as an access port during normal outages. The issue with the isolation gate dropping properly to the dock has been addressed and no further problems are anticipated. Cary will see that a full report outlining all of the repairs made to the fish trap is sent out to ARG members.

## **PROGRESS ON PLANS AND REPORTS**

All reports went out on CD for all resource groups. Comments are due March 1. The 2011 reports for SA 108 (Gravel) and SA 109 (LWD) will be out for review in March. The interim plans for the UB FSC were sent out on December 31, 2011 with comments due February 1, 2012. Arnie reported receiving comments from Brock. They are developing plans further and they will be back out for another ARG review in October. The schedule is the same for the Lower Baker FSC.

SA106: The Flow Implementation Plan will also be out for preliminary review in the April / May timeframe and is due to FERC in October, 2012. Jory is currently working on an internal draft of that plan. The Baker River gage at Henry Thompson Bridge routinely reads high. PSE is working to address this in order to tighten up the data stream and also ensure compliance for instream flow.

SA505: Pre-proposals for aquatic riparian habitat were discussed at the November ARHWG meeting. Final proposals are due to Jacob by February 15. Jacob will send out a reminder email to all as he has yet to receive any final proposals. The March 13 ARG meeting will be combined with the TRIG for formal proposals. The April 5 TRIG meeting will also be a joint meeting with the ARG where members will make the determination of which proposal(s) to fund. Jacob received a letter withdrawing the hedgerow proposal by WDFW, WWAA, Skagit Conservation District, and the Samish Indian Nation. They were disappointed that their pre-proposal was not well received and suggest a better definition up front of what type of proposals the ARHWG is seeking. PSE will email this letter out to ARG members to review. They will also prepare a draft response and send that out for comment by ARG and TRIG members before sending it to the initiators of the letter. They will thank them for their participation and emphasize that our intent was to keep the process easy so good projects can be vetted.

## **NEXT ARG MEETING**

March 13: Agenda will include SA 104-connectivity annual update, and review of SA 505 (ARHWG) proposals.