Final Meeting Notes

June 14, 2011 / 9 a.m. – 12:00 p.m. / Baker Lake Lodge, Web-X, Call

PUGET SOUND ENERGY
The Energy To Do Great Things

Baker River Project License Implementation

Aquatic Resources Group

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

PRESENT
Arnie Aspelund, Doug Bruland, Jacob Venard, Nick Verretto, Scott Williams by phone, and Pam Garland (PSE); Brock Applegate and Brett Barkdull (WDFW); Lorna Ellestad, Dan Berentson (Skagit County); Steve Fransen (NOAA); Greta Movassaghi (USFS), Bob Helton and Ellen Bynum (Citizens); Stan Walsh (SRSC); Robert Franklin (Sauk-Suiattle Indian Tribe); Phil Hilgert and Stuart Beck (R2); Lyn Wiltse and Jamie Riche (facilitators, PDSA Consulting).

DECISIONS – none today

2011 ARG MEETING DATES: July 12 Conf. Call (9-11 am); Aug. 9 Mtg/Video conf at PSE Snoq and Skagit Offices (9-3 pm); Sept. 13 Mtg at Lower Baker Office in Concrete followed by FPTWG (9-5 pm); Oct. 11 combined with BRCC Mtg/Video conf at PSE Snoq and Skagit Offices (9-3 pm); Nov. 8 Conf. Call (9-11 am); and Dec. 13 Mtg/Video conf at PSE Snoq and Skagit Offices (9-3 pm).
FPTWG: Combined with ARG meeting on 9/13 at PSE Lower Baker Office in Concrete

ACTION ITEMS
- All Provide informal comments on the draft gravel plan to Arnie by July 12.
- Arnie Send email reminder to the full ARG re: draft gravel plan informal review timeline.

PREVIOUS - STILL RELEVANT - ACTION ITEMS
- Chuck Ask Linda Smith to give update on GI progress at upcoming ARG meeting.
- Steve Identify the Olympia contact to coordinate re. HGMP with WDFW (in process).
- Co-Mgrs Send a draft Fish Production Plan to Arnie ASAP (as per FPFP).
- All Review / update the ARG representation list for your organization (ongoing).

BRCC UPDATE
The fourth Wednesdays will continue to be reserved throughout 2011 for BRCC conference calls as needed. In-person meetings are scheduled semi-annually (spring and fall); the next get together is tentatively planned for October and to be combined with the ARG meeting. Arnie reported that the PSE Hydro Department has been reorganized under Paul Wetherbee (Ed Schild is now Director of Electric Operations). Licensing implementation is being consolidated into Cary's area of responsibility and Kim Lane is moving into the Project Management Department. These changes will not impact the ARG.

The September ARG will be held at the Lower Baker office combined with the FPTWG to give folks an opportunity to see the Lower Baker FSC construction. The October ARG will be shared with the fall BRCC meeting. Dates have not changed.

SA 108 - BAKER RIVER GRAVEL IMPLEMENTATION PLAN (BRGIP) REPORT
Phil reported that the SA 108 Baker River Gravel Management Plan was filed with FERC on January 19, 2011; the FERC approved the management plan on March 2, 2011. The FERC order approving the plan

requires development of an implementation plan within 12 months. A draft Baker River Gravel Implementation Plan (BRGIP) was distributed to ARG members June 8 for informal review. Everything in today's PowerPoint can be found in that draft plan. He reminded attendees that the implementation plan will identify monitoring measures, triggers to augment gravel, and potential gravel augmentation measures. The goal of SA 108 monitoring is to identify trends in reduced gravel recruitment to see whether gravel augmentation is warranted.

Phil introduced Stuart Beck, R2's expert on sediment. Attendees who participated in the relicensing process remember Stuart from his work during that effort. Stuart walked us through a PowerPoint of the report. He described the morphological characteristics of a river that is in balance, in a state called dynamic equilibrium, where channel conditions fluctuate around a mean condition.

The Baker River gravel plan proposes to monitor:

- Channel response in three locations (one upstream of the confluence, two downstream), with three cross-sections per site (channel width apart) and survey profile to actual elevation (NAVD 88); and
- Substrate response in three locations using 10 Wolman pebble counts per site, 100 particle measurements per pebble count, thus creating a sample size (n) of 1,000 measurements per location.

The group talked at some length about the specific locations for the proposed study transects. Phil provided context of the various contributions of drainage areas (see Figure 3 in the BRGIP). The best place to monitor evidence of potential gravel impacts from the Baker Project will be in the nine mile reach between the Baker confluence and Finney Creek; thus the monitoring sites are placed one above the Baker River confluence and the other two are proposed within that reach. Lorna observed that it is difficult to ascertain the specific contributions of each river element or activity. Stuart concurred, noting the complexity and number of impacts on this particular river system.

To address channel response (whether the channel is degrading or becoming deeper) the proposal is to calculate a site-averaged bankfull depth using data from three transects measured at each site. To address substrate response, R2 proposes to measure sediment particle size distribution using ten Wolman pebble counts per site at three sites. The proposed triggers are:

- Site-averaged bankfull depth increase of more than 10% at two adjacent sites over 10 years; or
- The percent of sediment particle size > 6" (152 mm) increases more than 10% at two adjacent sites over 10 years.

Figures 8 and 9 in the BRGIP demonstrate how trend lines would be calculated for purposes of the proposed triggers. The study period is intentionally long (rolling 10 year analysis) to allow for the expected annual variance in channel and sediment response. The group noted that if a major flood occurs during the study, the trend analysis may need to be re-analyzed.

Phil walked the group through potential response actions if sediment coarsening is identified.

Next Steps: PSE is seeking informal comments on this draft plan. PSE wants to identify and resolve any gravel monitoring or augmentation trigger issues over the summer. A formal draft implementation plan will be distributed to the ARG in November for formal review and comment. The draft plan with response to formal comments will be submitted to the FERC as part of the annual reporting process. Monitoring will be initiated before March 2012.

Lorna and the other attendees thanked Stuart and Phil for their informative presentation.

FPTWG UPDATE

Nick reported that the group met June 8 to review the recent UB FSC net repair and related lessons learned, 2011 data for the UB FSC performance study, and the construction plans for the LB FSC. The LB FSC is scheduled to go live in March 2013 and construction is underway. Arnie projected photos of the steel work

for the lower level belly tanks, which will be shipped to the site in early August. Nick reviewed the net anchoring process, conditions contributing to the tear, repair process, and recommendations for the LB FSC net design.

Nick reported on the flow study and preliminary results that show Sockeye recapture rates between 80% and 85%, increasing weekly … fish started showing up within four hours of their release. Coho (mid-return) recapture rates are currently at 62% - 65%. Sockeye are on the receding part of their migration.

This year, we're at about 260,000 so far (third-largest run on record so far), as opposed to last year's 525,000 record fish at Upper Baker.

Right now, Doug's crew handles every fish that comes out of the reservoir. The managers are conducting studies to determine what level of sub-sampling (between 10% and 40% sampling) would maintain good quality data while reducing the stress to fish (less handling). Rough information was discussed now, Nick will review the data and more on this will be presented at a later ARG meeting.

Nick also reported on the FPTWG's discussion about stress relief ponds and related tests to improve some issues with the weirs. Stan pointed out that the fish had been allowed to swim out freely at their own volition. At the meeting, the group agreed that they should be held for 24 hours allowed to go at their own volition during day 2 and 3 and then forced out after 72 hours.

Nick noted that the FPTWG's workload is getting lighter; he suggested that the team will talk about its future (it it time to be subsumed within the ARG?) at an upcoming meeting, perhaps in September.

SPAWNING BEACH DECOMMISIONING

Scott phoned in to provide an update on this project. He will be meeting with the CRAG again June 15. He will review the matrix with them and answer any additional questions about the plan for decommissioning the beaches. He expects to be ready to bring a consultant on board as a next step.

Greta reported that since our last update, the USFS updated the scope of work related to the spawning beaches, particularly related to the access point for fry release. The USFS agreed to removal of the historic features (assuming concurrence from CRAG); this offer is contingent upon removal of all constructed elements from within the flood plain, which would require fry releases from the adjacent highway.

SA 305 LOWER BAKER DEVELOPED RECREATION

Pam Garland, Recreation Team Lead, introduced the ARG to PSE's efforts (relative to SA 305) to acquire a public access site on Lake Shannon for the purpose of providing additional recreational access to the project. An undeveloped boat access site has been identified and the RRG and Skagit County Parks and Recreation have agreed that this is the site that will be developed for public access. The site shall be developed in accordance with SOBA (State Organization for Boating Access) standards for small access sites and shall be operated and maintained for the term of the license. The team has consulted with the LB FSC team to coordinate common aspects of the two projects, including permitting, the Water Quality Protection Plan and grading.

Lorna asked whether, and Pam confirmed that, the design will take into account the future elevations related to flood storage. The design considers the pool elevations in the SA article 106 Aquatics tables.

Pam showed preliminary sketches of possible alternatives for launch design. The preliminary drafts accommodate about 40 parking stalls. For context, the first day of fishing season typically sees about 65 vehicles and boat trailers; this level of impact is not indicative of the rest of the season, but is typical for the first day. She noted that while the article requires the site be suitable for concrete launches, a concrete launch is not required and may not be the best solution for the site and budget. She is working with designers to evaluate this.

Next steps: a civil engineer will prepare a drainage and grading plan (in process) as the design continues to the 30-40% level. PSE's permitting folks will meet with Skagit Co. Planning. Per Appendix A-5 of the Settlement Agreement, this project will be completed within the budget of $1.1M; therefore all planned features will be prioritized and completed as possible based on costs. The ARG will see a draft plan on this later this fall.

FISH FACILITY OPERATIONS UPDATE

Doug updated the group on the hatchery activities. All incubation is now complete. All sockeye that are to be released have been released. 127,000 will be held, ad-clipped, and released into Baker Lake in the fall. Rainbow trout aren't in yet. We will get them from the Arlington hatchery after July 4th.

The headworks were modified to reduce organic debris and large sediment that can get entrained in the water supply. Screens have been installed and are brushed daily; this seems to be working good.

Doug noted that operations documentation continues. They are also completing the remainder of capital equipment purchases and closing out the contractor's punch list of final repairs.

The upstream fish trap saw its first sockeye adult last week (one early arrival); Doug noted that this may mean a big season is coming … or it may mean nothing. The co-managers have given PSE the sockeye loading distribution plan for the hatchery program and the spawning beach program, and the team is ready if it does prove to be a big year for sockeye.

The downstream fish passage will continue through July and is winding down. Coho are still coming in, but sockeye are nearing the end of their run. About 260,000 total juvenile fish have come in. Doug reminded folks that the freeze-brand study fish were held and not put into the reservoir until after the net repair was completed. 17% of the freeze-brand coho released in Lake Shannon were recovered at the Lower Baker gulper, which is pretty good considering that only one pump was fully functional.

Meeting Evaluation – Worked Well

- Great Article 108 Gravel Plan presentation (Phil & Stuart!)
- Stuart's improvisational demonstration of the Wolman process
- Great venue for field trip

Meeting Evaluation – Do Differently

- Nothing noted.