

BAKER RIVER PROJECT LICENSE IMPLEMENTATION

Aquatic Resources Group

February 10, 2009 (9:00 a.m. - 1:30 p.m.)

**WDFW Mill Creek Office
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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 January 13th, 2009 meeting	9:00 - 9:10
2. BRCC and License Process Update	9:10 - 9:30
3. Presentation on System Reliability/Mid-C Operations (PSE-Galloway) <i>Break at 10:30</i>	9:30 – 10:30
4. Discussion of Article 305 & 306	10:30 – 11:30
5. Brief Updates Fish Facilities Operations Topics <ul style="list-style-type: none">• Little Park Creek Trap• Sockeye Spawning Beach and AI Operations (WDFW/PSE)• Fish Rearing Inventories & Releases (PSE-Bruland)• Adult Trap Protocol Update or Changes• Skagit River Fish Update (WDFW) <i>Lunch Provided at 12:00</i>	11:30 - 12:30
6. Required Decision Today: <ul style="list-style-type: none">• None	
7. Hatchery Update (PSE-Jenness)	12:30 - 1:00
8. FPTWG Updates	1:00 – 1:15
9. Other License Implementation Updates	1:15 – 1:25
10. Evaluate meeting, set agenda for next meeting (March 10 th , 2009 at Mill Creek)	1:25 – 1:30

Baker River Project License Implementation

Aquatics Resource Group Meeting Final Meeting Notes

February 10, 2009 ~ 9 am – 2:30 pm
**Puget Sound Energy --Bothell, WA
Camelot Conference Room**

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

PRESENT

Arnie Aspelund, Cary Feldmann, Andrew Harris, Josh Jacobs, Mike Tongue, Gene Galloway, Mark Killgore, Kim Lane, Jacob Venard, Jory Oppenheimer, Dave Jenness, and Doug Bruland (PSE); Phil Hilgert (R2); Mark Hunter, Kevin Clark by phone, Ted Thygesen by phone, and Rich Johnson (WDFW); Tom Karsh by phone (Skagit Co.); Stan Walsh (SRSC); Bob Helton (Citizen); Stan Zyskowski (NPS); Chuck Ebel (USACE), Lou Ellyn Jones by phone (USFWS); Brenda Warden by phone (DNR); and Jamie Riche and Candace Wilson (PDSA Consulting, Inc.).

NEXT ARG MEETING: March 10, 2009, and second Tuesdays throughout 2009

DECISIONS – none

NEW ACTION ITEMS

- Arnie: Send Bob Helton a copy of the full-size Mid-C presentation
- All: Review ARG Norms, prepare to discuss and approve at March meeting
- Mark K: Convene an Article 107c teamlet Summer 2009, including Stan W., Bob H., USACE, Skagit Co., and a PSE hydrologist(s) and biologist(s)
- Arnie: Ensure Little Park Creek trap is on 3/17 FPTWG agenda
- StanW: Connect with co-managers about distribution of sockeye fry
- Jacob: Send Article 505 Aquatic Riparian info to Stan Walsh and call Arn Thoreen

PREVIOUS, STILL RELEVANT, ACTION ITEMS

- All: Ensure your agency / organization has identified its representatives to the BRCC
- Cary: Check representative response status, follow up as needed
- Jed: Report on fry allocation between the two reservoirs (in spring)
- Jed: Look into disease policy issues re: WDFW's request to plant Rainbow in Grandy and Vogler
- Brett: Set up meeting w/ co-mgrs to address holding early returns for lake plants of sockeye adults

REVIEW OF AGENDA, NOTES, HANDOUTS

The January 13th ARG meeting notes were accepted with no changes. The agenda was revised to remove FPTWG Updates as the group has not met since the last ARG meeting.

BRICC / License Updates

Cary and Arnie reported. BRCC met on January 28 by conference call, formally establishing BRCC and all the working groups according to the Settlement Agreement. Paul shared information about a FERC/PSE meeting to coordinate license implementation going forward. Articles 305/306 were discussed. Reports from team leads for resource groups were received.

BRCC reviewed meeting norms. ARG will utilize similar norms (attached to today's agenda). Please review. We will review and approve at the next ARG meeting and annually.

SYSTEM RELIABILITY / MID-C OPERATIONS

Gene Galloway introduced PSE employees Josh Jacobs, Manager of Power and Gas Supply Operations, and Mike Tongue, Manager Load Office, made a presentation on the role of their department in PSE operations and how they interface with Gene during real time operations. They discussed the strict guidelines that must be followed to monitor energy capacity to avoid sanctions, and the process they follow to manage energy capacity. They reviewed the details of their hourly/daily schedule.

All Balancing Authorities (BA) on the west coast maintain the same schedule, and the flow of energy must be maintained at 100% reliability, according to NERC¹ and WECC² regulations. Any errors to the forecast, or system frequency deviations among any of the BAs must be accommodated according to contract so that blackouts and expensive sanctions can be avoided.

A regular amount of reserve generation is set aside to handle normal system deviation. Amounts are checked automatically every 4 seconds. *The spinning reserve is the extra generating capacity that is available by increasing the power output of generators that are connected to the power system.* Readings are taken every minute to ensure PSE stays within stipulated ranges. There is little room for error. If more megawatts are produced than can be used, production must be reduced. There is no intra-hour market, so the extra production cannot be sold. This has been particularly crucial with wind energy because of its inherent variability. In addition to variations in generation, problems with the transmission system can affect deliverability of available power.

There was some challenging periods managing the hydroelectric generation flows in recent years. The 2008 spring runoff was unique, and there were constraints at 5 Mid C projects. Douglas, Chelan and Grant PUD all imposed restrictions on generation during this high flow period. A multitude of different approaches, including the timed generation at Snoqualmie and Electron, strategic use of gas-fired generation, and the purchase of capacity from another provider were used to maintain reserves *and provide other ancillary benefits*. PSE spent an additional \$1.5 million to maintain energy capacity for its customers during this event.

PSE has extensive wind generation and under certain conditions, PSE must "spill" if the wind capacity available exceeds demand. ARG members said they would much rather see wind spilled as opposed to water, however wind spills are typically a function of electric load versus supply while hydro spills at Baker typically occur as a result of floods.

Plans are being developed to handle spring runoff during 2009, and should be completed mid-March. A desire was expressed that large number of within day downramps at Lower Baker during the spring should

be avoided when considering and managing all the constraints. PSE noted that it operates all projects within each project's contractual and regulatory constraints including the Baker Project. There was an appreciation for the information that was presented by the PSE team to the ARG.

¹ *North American Electric Reliability Corporation*

² *Western Energy Coordinating Council*

ARTICLE 305/306 NEXUS TO 107(c)

Mark Killgore introduced himself and gave a presentation on water management at the Baker Project. He gave background on PSE's efforts regarding planning and consultation done with the Corps to manage flood events. ARG members discussed previous events and different situations that occurred as a result. Bob Helton asked about the accuracy of forecasting and cross-checking of forecasting with actual rainfall. *Mark indicated that several precipitation gages were located in the Skagit Basin including PSE's Baker facilities. Mark also explained, that forecasts are dynamic and can change over the course of the flood event and even during the days leading up to the flood.*

Mark briefly reviewed flood control provisions in the License articles. PSE must engage in consultation with the ARG, and specifically Skagit County and the Corps, regarding *means and operational methods to operate the Project reservoirs in a manner addressing imminent flood events and consistent with the requirements of the license, and then issue a report to FERC* within 3 years of license issuance.

The group decided to form a teamlet (*Imminent Flood Teamlet*) to begin work on this and develop the timing of the consultation process. Mark will coordinate with Arnie to invite ARG members; Stan W. and Bob H. expressed interest in joining this teamlet with Skagit Co., PSE, and the USACE. Cary recommended protocols need to be developed in advance of flood seasons so they can be evaluated prior to submitting the report to FERC. *We may be able to use information developed by PSE during relicensing (and possibly information from the Corps) as a basis for assessing the effects, but we need to determine sequences of actions that will minimize the effect on aquatic resources.*

Mark mentioned that PSE would be meeting with the Corps on February 11th to introduce himself and the overall Baker License Implementation Manager, Kim Lane and to broadly discuss flood control and water management issues.

FISH OPERATIONS

Little Park Creek Trap

Doug reminded folks of the issues related to the operation of the Little Park Creek trap (see the 1/13/09 ARG notes for more information). The group discussed the possible value of continuing the Little Park Creek trap to compare the FSC to the former Gulper. If Little Park Trap trap data are valuable for monitoring and evaluating FSC operations, then it would be PSE's responsibility to maintain the trap. Since no one else has stepped forward to operate the trap, either PSE owns this work, or it goes away.

Cary suggested that the FPTWG might be the best group to determine whether the data that come from the operation of this trap are worth the work involved, and if it is worthwhile, how long the trap should be operated each year. The FPTWG's next meeting is March 17. When asked if making a decision about the trap's operation on March 17 would give enough time to install the trap, Doug noted that it could be

installed within a week. Arnie will coordinate with Nick to ensure this is on the FPTWG's agenda.

Sockeye Spawning Beach and AI Operations

Doug walked us through the incubation worksheet on Kevin K.'s behalf. All eggs have been shocked. There was a higher percentage of loss in the last session, but it is normal toward the end of the run. We got 991,000 eggs after culling out the morts.

Fry Planting – Kevin saw 4-5 fry in the outlet of the spawning beach, should start seeing fry numbers begin to increase next week. A counter is installed on the outlet rather than at each beach as there are not enough counters to cover each beach. They are looking into installing a second counter on the outlet to act as a backup. Season loss (not including the loss of sac fry) is 4% so far, which is not bad.

The co-mangers will need to determine sockeye fry allocation this spring to Baker Lake and Lake Shannon from the AI program.

IHN tests came back all negative.

Baker Fish Rearing Inventories & Releases

RR1 – Just finished. We freeze-branded Coho and sockeye, all but 5K, which are being held for freeze-branding and release to Baker, were released.

RR2-Coho will be moved to large circulars and released to the Skagit late April.

Trout Pond – Rainbow. The tribes took about 1,000 for their derby. The others will be released into Depression Lake through the summer for recreational fishing.

Circular 1&2 – We freeze-branded groups to be released into Baker and Shannon. (The handout includes a typo; it doesn't show Lake Shannon)

Circular 5 – R2 pit-tagged the sockeye to be released in April for the FSC biological study

Coho Incubation – 240K Coho eggs are in the process of weekly shocking. The loss rate is low. We will hold 60-65K, and the rest will be released into Lake Shannon.

The FSC – Doug noted that ballasting is done and balancing of the screens is going well. They are keeping the fore bay running to prevent freezing and are pulling out debris. Easy Docks will be attached end-to-end and installed as an added debris barrier as soon as it thaws. They did an ROV inspection of the guidenet, and it checks out great.

Significant snowfalls have caused access issues at Baker. PSE folks have been diligently digging their way in, and can now access the blue tarp.

Adult Trap Protocol:

There were no changes noted.

Skagit River Fish Update:

No update presented at this time.

HATCHERY UPDATE

Dave reported that the project remains on track. McDougall is preparing to place sediment erosion features late March. Snow may need to be moved. A site visit with Ernie Brannon is scheduled for March 4. A pre-construction meeting will be held March 5. Work is ongoing with Whatcom County on building and grading permits. The USFS special use permit is outstanding; we anticipate we can work through this.

OTHER LICENSE IMPLEMENTATION UPDATES

Arnie reported that the Smolt Capacity Study has been delayed due to significant ice on Baker Lake. The team is poised to move forward as soon as ice melts. A description of the field methods is being drafted and will be sent out to the ARG before the next meeting.

R2 is developing the Fish Propagation Facilities Plan, due out to ARG April 1 for a 30-day review. We will have a review draft to the “Fish Resource Parties” and the USFS prior to distribution to the ARG. Plans will follow the standardized format developed by the TRIG.

An Article 505 Aquatic Riparian Teamlet conference call meeting is scheduled for Feb. 17, 10 a.m. ARG and TRIG members have been invited. The purpose of the meeting is to start a dialogue about implementation, set up the next meeting date, and determine next steps.

HANDOUTS

- Agenda, Notes, 2008 – 2009 Meeting Schedule, ARG Representative List,
- Revised BRCC-ARG Norms
- BRCC Notes – 1/28/09
- Skagit River and Flood Storage
- Spring Runoff 2008 Presentation Slides
- Water Management at the Baker Project
- Incubation Worksheet 2008
- Baker Hatchery Fish Inventory February 2009
- Baker Adult Trap Protocol
- Baker River Adult Fish Return

MEETING EVALUATION**Worked Well:**

- We were able to evacuate safely (fire alarm)
- Presentations were very good
- BRCC intro
- WebEx good

Do Differently:

- Room not large enough for full ARG group

AGENDA FOR NEXT ARG MEETING

March 10, 2008; WDFW Mill Creek

1. Welcome, review notes, action items, agenda, norms
2. BRCC and License Updates
3. Presentations – Corps on Flood Control Operations (maybe April?)
4. Implementation Plan Updates
5. Hatchery Update
6. Fish Operations Topics
7. Evaluate meeting, set next meeting agenda & location