



PUGET SOUND ENERGY

The Energy To Do Great Things

BAKER RIVER PROJECT LICENSE IMPLEMENTATION

Aquatic Resources Group

May 12, 2009 (9:00 a.m. - 1:30 p.m.)

**WDFW Mill Creek Office
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Please tell Arnie (425-462-3442 (w) or 206-276-0316 (c)) if you plan to call into meeting

AGENDA

1. Review meeting notes/agenda/action items from April 14th, 2009 meeting	9:00 - 9:15
2. BRCC and License Process Update	9:15 - 9:45
3. Placeholder for Presentation on Wind Integration (PSE Asset Manager of Wind Resources, Steve St. Clair)	9:45 – 10:30
<i>Break at 10:30</i>	
4. Placeholder - Draft Fish Propagation Facilities Plan	10:30 - 10:45
5. Required Decision Today: <ul style="list-style-type: none">• None	
6. Hatchery Update (PSE-Jenness)	10:45 - 11:00
7. Brief Updates Fish Facilities Operations Topics <ul style="list-style-type: none">• Sockeye Spawning Beach and AI Operations (WDFW/PSE)• Fish Rearing Inventories & Releases (PSE-Bruland)• Adult Trap Protocol Update or Changes• Skagit River Fish Update (Fall Returns) (WDFW) <i>Lunch Provided at 12:00</i>	11:00 – 12:00
8. FPTWG Updates <ul style="list-style-type: none">• 4/29/09 Conference Call, Outmigration Update, FSC & Adult Trap Design (PSE)	12:00 – 1:00
9. Other License Implementation Updates <ul style="list-style-type: none">• Article 505 Teamlet update	1:00 – 1:20
10. Evaluate meeting, set agenda for next meeting (June 9 th , 2009 at Mill Creek)	1:20 – 1:30



**Aquatics Resource Group Meeting
Final Meeting Notes**

May 12, 2009 ~ 9 am – 2 pm
WDFW – Mill Creek

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

PRESENT: Arnie Aspelund, Cary Feldmann, Doug Bruland, and Steve St. Clair (PSE); Mark Hunter and Rich Johnson (WDFW); Craig Olson (NW Indian Fisheries Commission), Arn Thoreen (Skagit Fisheries); Steve Fransen (NOAA); Bob Helton (Citizen); Chuck Ebel (USACE); Lou Ellyn Jones by phone (USFWS); Lyn Wiltse and Jamie Riche (PDSA Consulting)

UPCOMING MEETING DATES:

BRCC: 5/27 (4th Weds thru 2009, except Nov/Dec); Aquatic Riparian Habitat Workgroup meets following the 5/27 BRCC meeting

FPTWG: 6/8 at SeaTac

ARG: 6/9 (2nd Tuesdays throughout 2009)

DECISIONS – none today.

NEW ACTION ITEMS

- Arnie Distribute the Wind Integration PPT with today's notes.

PREVIOUS, STILL RELEVANT, ACTION ITEMS

- Jed: Reconvene a teamlet in April/May to address sockeye fry release strategies
- 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)
- Brett: Set up meeting w/ co-mgrs to address holding **this** year's planting of sockeye adults

REVIEW OF AGENDA, NOTES, HANDOUTS

Lyn pointed out that there was one clarifying addition to the April 14 draft notes (page 2).

BRCC / LICENSE UPDATE

The BRCC met 4/22/09 using Webex technology, which worked well for allowing callers to see the presentations and handouts in real time. In addition to talking about escalation formula and budget reporting process, the BRCC also talked about the project boundary (PSE will send a proposal to FERC by year-end), USFS 4(e) coordination, and resource group updates. CRAG is working on the historic property management plan; and the RRG is working on the resort redevelopment plan.

At the BRCC meeting, Ed shared that a pump filter failed at the FSC on 4/21, spilling about three gallons of non-toxic vegetable-based oil onto the deck and some made it into the lake. After discovering the spill at 7 am, PSE crews contacted DOE, DEM, and the National Response Center (per normal spill procedure); they contained the spill with booms and soaked up the remaining oil with absorbent pads. By 3 pm, the spill was cleaned up and PSE was released to return to normal operations.

BRCC also celebrated feedback from Steve Hocking (FERC licensing rep) that – of the 17 projects he has worked on – the Baker Relicense process is by far the best, both in terms of coming to agreement and implementation to date.

PSE's PRESENTATION ON WIND INTEGRATION

Steve St. Clair, PSE's Manager of Renewable Assets, joined us to share information about the history, current capacity, and projected growth of wind generation. He described the facilities at the Hopkins Ridge Wind Project (near Dayton) and the Wild Horse Project (near Ellensburg), and answered related questions.

Wind energy is a wholly owned domestic resource, is compatible with many other land uses, and is the fastest growing source of electric generation worldwide (29% growth in 2008). Wind turbines generate power during wind speeds between 9 and 56 mph (greatest power output between 28 and 56). The blades turn at a rate of up to 16 rpm; a gear box is used to create the rpm's needed to generate power. Currently, PSE is finding that its "wind farms" are generating power about 65%-70% of the time.

Steve walked the group through PSE's forecast of energy needs (load forecast) and anticipated future energy sources (resource mix). In 2003, PSE set a goal of achieving 10% of its energy from renewable sources by 2013, and the organization is on track to meet that goal. The state standard is to achieve 15% renewable by 2020. There is talk of a national standard of 20% by 2030; if that goes into effect, it would require a ten-fold increase in wind power generation across the northwest (WA, OR, ID, MO).

Wind presents interconnectivity challenges related to several factors; Steve focused on variability: moment-to-moment, day-to-day, seasonal, etc. Day-ahead and week-ahead forecasts can achieve 80% to 85% accuracy, but still represent considerable challenges for PSE's load dispatchers, given the amount of variability in any 15-second, one-minute, or ten-minute period (plus or minus forecast vs. actual can vary as much as 50%). Steve showed an example where there was over 100 megawatts of unanticipated variation within one hour. Using a diverse resource portfolio, a utility may be in a better position to balance wind variability with its other resources in a reliable and cost-effective manner. Steve's entire PowerPoint presentation will be distributed with these meeting notes.

HATCHERY UPDATE

Dave Jenness (PSE) joined the group by phone to provide an update on hatchery construction. Excavation and structural fill for the hatchery is nearly complete, and concrete work is underway.

The outage is scheduled for June 1-15 to install the new main pipeline, drain pipes, and vaults; the contractor will be working hard (12 hour days, 6-7 days/week) to get the work done during the outage, so

this would not be a good time for site visits. Coho and Sockeye will be on a domestic water supply during the outage. Communication between fisheries folks and construction folks remains excellent.

After the outage is complete, the existing hatchery facility will be operational again. We viewed some construction photos showing site mobilization, excavation, trenching, and piping layouts.

FISH PASSAGE TECHNICAL WORKING GROUP

Doug reported that the FPTWG held a Baker site visit April 28, and met at SeaTac April 29. The ARG had a brief conference call during the 29th meeting to formalize a decision on a proposal to the LB FSC start-up date. The group reached consensus to extend the operational start-up date for the LB FSC project by one year to 2013 (March 1).

The biological studies are underway to identify patterns of fish movement at UB. At LB, they have acoustic arrays in place to determine whether fish have a preference for movement within the reservoir. The UB outage caused a drop in reservoir elevation at Lake Shannon and there is concern that some of the arrays may have hit bottom of the reservoir. We will continue to release the acoustic tagged fish over the next few weeks. We'll get to see the data sometime this summer.

FISH FACILITIES OPERATIONS TOPICS

2009 UB Juvenile Fish Trap Update: Doug shared information about a record-setting daily passage of juvenile sockeye through the FSC. The sunshine on May 9 - 10 (Mother's Day weekend), heralded an arrival of massive numbers of fish ... 60,000 fish on Saturday and over 58,000 on Sunday!! The crew put in yeoman's service, working into extended hours into the following early mornings to keep up. The previous daily record was 28,000 on May 4, 2006. Cary shared charts of recent returns to put the record run into perspective and suggest possible season projections based on views of the run timing.

The group noted that there didn't seem to be a correlation between numbers of incoming fish and flow change. The pace of transport (truck) and sampling (which stayed at 100%) kept up with the influx. Furthermore, experimental coho groups released in mid-April (freezebrand coho) achieved 70% recapture-recovery earlier than ever. In past studies, these groups typically accrue this recapture rate later in the migration season. Doug anticipates quite a few more coho will continue to show up.

Fish Rearing Inventories / Releases: Doug B. walked us through the Baker Hatchery Fish Inventory and noted that fishery crews are coordinating with the hatchery construction crew to be ready to switch to a secure domestic water supply for the upcoming outage. Refer to the handout for greater detail to the following inventory:

Raceways: RR-1 has 174,000 Sockeye fry to hold for a mid-June release into Baker Lake of about 100,000 and a fall releases of about 65,000 with the small balance held for a spring 2010 release. RR-2 has 219,000 Coho, of which 60,000 are to be retained for a spring 2010 release, the balance will be released into Lake Shannon mid-June.

Trout pond: A few rainbow trout remain for charity and tribe events; the releases into Grandy and Vogler

Lakes went smoothly and the tribe will utilize 1,100 fish. The trout pond will then be drained during the upcoming outage.

Some pit-tagged sockeye and coho (controls) held in net pens in the UB forebay were released into the FSC entrance for study. Incubation fed fry are all out.

Beach 4 and Artificial Incubation Report (prepared by Kevin Kurras): As of May 11, we have 1,307,267 Sockeye fry counted out of the four sections of Beach #4 and released into Baker Lake. The season total for the AI group was 965,000 which were fed and released into Baker Lake. No IHNV in either the beach fry or AI fry was detected. Normal shutdown and disinfection will be done after Memorial Day weekend. After that, the rearing programs of Coho and Sockeye will switch to the domestic water source until the third week of June while hatchery construction facilitate the installation of the new main pipeline and drain lines.

Adult trap: Not currently collecting any fish due to construction activity. The trap should be watered up and operational again June 15.

AQUATIC RIPARIAN HABITAT WORKGROUP (ARTICLE 505) UPDATE

The Aquatic Riparian Habitat Working Group, which is a joint group comprised of ARG and TRIG members, met after the April BRCC meeting and are planning to continue to meet after BRCC meetings to take advantage of the facilitation PSE provides. They are working now on process and screening criteria for project selection. Work is also underway on the Article 505 plan. Notes from this group have been distributed to ARG members via email. The next meeting is scheduled for May 27 and the agenda includes discussion of acquisition opportunities, etc.

DRAFT FISH PROPAGATION FACILITIES PLAN

The official copy of the draft fish propagation facilities plan is out for review. No comments shared today. Written comments are due to Arnie by June 1.

HANDOUTS

- Agenda, 4/14 notes, Meeting Schedule, ARG Representative List
- FPTWG Notes
- ARHWG (Article 505) Notes
- Fry Production Worksheet
- Baker Hatchery Fish Inventory May 2009
- Baker River Adult Fish Return
- Baker Adult Trap Protocol
- Upper Baker Juvenile Fish Trap Data

MEETING EVALUATION

Worked Well:

- Webex worked well, (note: can't show streaming video)



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- Chuck's recovery (hobo spider bite ... yikes!)
- Thanks, Rich, for your years of service!
- Wind Power Presentation
- Our return to Spraguesville (Whahoo!)
- Heavy thinking
- Cary's videos: FSC overview and cool wind turbine failure
- Arn's recycled doorbell

Do Differently:

- May try Webex for the June 9 mtg.
- Some audio difficulties (phone)
- Light attendance (no Tribal representatives)

AGENDA FOR NEXT ARG MEETING: June 9, 2009

Possible Webex / Phone Conference (*holding WDFW Mill Creek, just in case*)

1. Welcome, review notes, action items, agenda, norms
2. BRCC and License Updates
3. Implementation Plan Updates
4. Hatchery Update
5. FPTWG Update
6. Fish Operations Topics
7. Article 505 Aquatic Riparian Habitat Teamlet Update
8. Evaluate meeting, set next meeting agenda & location

