

BAKER RIVER PROJECT LICENSE IMPLEMENTATION

Aquatic Resources Group

December 9, 2008 (9:00 a.m. - 2:30 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 November 13th, 2008 meeting | 9:00 - 9:10 |
| 2. BRCC and License Process Update | 9:10 - 9:30 |
| 3. Recent Baker Project Flow Releases (Flood Control, IPP, Interim Operations) <i>Break at 10:30</i> | 9:30 - 10:30 |
| 4. System Reliability/Mid-C Operations Discussion | 10:30 - 11:30 |
| 5. Hatchery Update <i>Lunch Provided at 12:00</i> | 11:30 - 12:00 |
| 6. Required Decision Today: <ul style="list-style-type: none">• Approach to Smolt Capacity Study (Teamlet Recommendation) | 12:00 – 1:00 |
| 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 | 1:00 – 1:30 |
| 8. Fish Passage Update | 1:30 - 2:00 |
| 9. Other License Implementation Planning | 2:00 - 2:25 |
| 10. Evaluate meeting, set agenda for next meeting (January 13 th , 2009 at Mill Creek) | 2:25 – 2:30 |

Baker River Project License Implementation

Aquatics Resource Group Meeting Final Meeting Notes

December 9, 2008 ~ 9 am – 1 pm
WDFW Office ~ Mill Creek, WA

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

PRESENT

Arnie Aspelund, Cary Feldmann, Gene Galloway, Bob Barnes, Paul Wetherbee, Jory Oppenheimer, Doug Bruland, Lynda Kupfer (by phone) and Dave Jenness (by phone) (PSE); Phil Hilgert (R2 Resource Consultants); Rich Johnson, Brett Barkdull (WDFW); Jon-Paul Shannahan (Upper Skagit Tribe); Arn Thoreen (Skagit Fisheries Enhancement Group); Stan Walsh (SRSC); Bob Helton (Citizen); Stan Zyskowski (NPS); Alison Evans (WA Dept. of Ecology); JoAnn Gustafson (WDNR); LouEllyn Jones (by phone)(USFWS); Lyn Wiltse and Becky Molander (PDSA Consulting, Inc.).

2009 ARG MEETINGS: 1/13, 2/10, 3/10, 4/14, 5/12, 6/9, 7/14, 8/11, 9/8, 10/13, 11/10, 12/8

DECISIONS MADE: None today.

NEW ACTION ITEMS

- Arnie: Ask Jacob to add JoAnn to cross-resource wetlands teamlet list.
- Gene: Update High Flows PowerPoint chart to include flood storage.
- Arnie: Attach updated (see above) PDF of Gene's PowerPoint presentation to these notes.
- Arnie: Invite Ken Brettman to give a presentation on USACE flood control operations.

PREVIOUS, STILL RELEVANT, ACTION ITEMS

- Arnie: Schedule a reliability / Mid-C / climate change dialogue for January, 2009 ARG meeting.
- Kevin: Work with Doug to compile and send out summary of AI data to all.
- Jacob: Set up Cross-resource wetlands teamlet by end of December, 2008.
- Jed: Report on fry allocation between the 2 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.

BRCC AND LICENSE PROCESS UPDATE

The last BRCC meeting was held November 19. No parties have requested re-hearings of the License Order. Skagit County has scheduled meetings with PSE to discuss additional flood storage operations.

At the BRCC meeting, the FERC reporting schedule was reviewed, as was progress made by the

individual resource groups. The next BRCC meeting will be January 28, 2009.

RECENT BAKER PROJECT FLOW RELEASES

Gene Galloway walked us through a PowerPoint presentation in review of actions taken to manage the recent high flow event. A rep from the USACE will do a presentation on their flood control operations for the ARG next month. A copy of the presentation will be distributed with the notes from this meeting.

SMOLT CAPACITY STUDY

Arnie explained that this teamlet held a conference call on Friday, December 5, to review the top four alternative approaches for this study.

Phil walked us through the suggested approach based on that conference call. The approach proposal will be included with the meeting notes distribution. The approach calls for doing a combination of:

1. Zooplankton sampling
 - Smolt production capacity could be estimated based on Zooplankton Biomass method
 - 10 meter and full depth tows
 - concern whether we would be getting a representative sample
 - add more locations?
 - include May in 2010?
 - how accurate must these data be?
2. Nutrient Analysis
 - will tell relationship of nutrient concentrations
3. Measuring Euphotic Zone Depth
 - Would compare secchi disk readings with light meter measurements. Smolt production could be estimated from a relationship to Euphotic Volume, with the collection of this data. However estimates could be complicated by glacial flour
4. Translating Mazumder 2004 smolt capacity estimates
 - he suggested that Baker Lake could support 2-3 times the existing number of smolts
 - we will measure nutrients and euphotic depth for Lake Shannon. We will also compare these data to those for Baker Lake.

We are required to have the capacity study complete by October 2010 (2 years from License issuance).

Next Step: Phil will develop a study plan based on this hybrid approach and the discussion at this meeting. He will talk with Peter Kiffney (NMFS) about his concern with the sample size of the zooplankton sampling. Results may be a recommendation to do all full depth tows in Lake Shannon. We will discuss this at our January Meeting.

HATCHERY UPDATE

Dave Jenness announced that they will be having a permitting meeting with Whatcom County this Friday. They still plan to start construction of the hatchery in March 2009.

BRIEF UPDATES FISH FACILITIES OPERATIONS TOPICS

Sockeye Spawning Beach and AI Operations (WDFW / PSE)

Doug reported they pulled fish out of Beach A on Monday, December 8. They sacrificed and spawned any remaining females with eggs. They realized that there weren't a lot of males left. Kevin Kurras and the fish techs are emptying the remaining beaches today.

They will spawn the remaining sockeye in the trout pond. Currently they have collected 522,000 eggs. This is way below our goal of 1.5 million. They won't be bringing any additional fish to the trout pond.

They shocked the first egg take and had less than 2% mortality-this is good. They are looking at other locations for release of fry next year (so not all are released at Blue Tarp to avoid potential predation problems).

Fish Rearing Inventories & Releases (PSE-Bruland)

Refer to the Baker Hatchery Fish Inventory Handout for specific details.

Raceway 1: Currently holding less than 10,000 juvenile sockeye. They released 55,730 on November 20. They released these at 32 fish/lb. compared with last year's 33 fish/lb. released December 11 and 12.

Raceway 2: Contains 60,000 coho. Some sockeye and coho will be freeze branded. The rest will be released in the spring. We will pit-tag 3,000 sockeye and 3,000 coho and will be releasing them into Baker Lake as part of the bio-study in the spring of 2009.

Trout Pond: Contains brood stock sockeye. We will spawn the remaining fish in the pond.

Circulars 0, 1, 2: Contain rainbow trout. We will move them to the trout pond after it has been drained and disinfected.

Adult Trap Protocol Update or Changes

Adult Trap Protocol remains unchanged.

Adult Returns

We will be providing steelhead broodstock to Marblemount through the month of December.

Spring 2009 Biological Study

We will rotate daily between 500 and 1000 cfs for this study. Control groups will be released weekly. All test fish will be released over the first 8 days of the study (4 consecutive days for sockeye immediately followed by 4 consecutive days for coho). The plan for this study will be reviewed in detail at the FPTWG meeting. We'll get a general update on this at our January meeting.

HANDOUTS

- Updated Agenda
- Agenda/Notes from 11/13/08 Meeting; 2008 – 2009 Meeting Schedule and ARG Representatives List
- Spawning Beach Report
- Article 101 – Estimating Smolt Capacity – Draft Study Proposal (December 5, 2008)
- Baker Hatchery Fish Inventory, December 2008
- Baker River Adult Fish Return, June 2008 – May 2009 Season Totals

- Baker River Adult Trap Protocol, Revised Sept. 2, 2008
- Adult Fish Updates for the Basin

MEETING EVALUATION

Worked Well:

- JoAnn's attendance
- Chicken soup
- Festive bracelet

Do Differently:

- Distribute info for review prior to these meetings, especially if decision is required

AGENDA TOPICS FOR NEXT ARG MEETING (January 13, 2009; Mill Creek WDFW office)

1. Welcome, review notes, action items, agenda
2. Fish Operations Topics
3. Presentation on USACE flood control operations
4. Presentation on System Reliability/ Mid-C Operations
5. Review of Draft Smolt Capacity Study Plan – Decision Required
6. FPTWG Updates/ Bull trout Genetic Analysis
7. Other License Implementation Updates
8. Evaluate meeting, set next meeting agenda & location