



BAKER RIVER PROJECT RELICENSE

Aquatic Resources Working Group

March 13, 2003

8:30 a.m. – 3:00 p.m.

U.S. Forest Service

Conference Room A/B (425-775-9702)

21905 64th Avenue West, Mountlake Terrace, WA

AGENDA

1. Review Agenda, Minutes, Schedule	8:30 – 8:45
2. Settlement Process-Update from Cross Resource Workshop, PME Status (2 nd Draft PMEs)	8:45 – 9:15
3. Report from Instream Flow Technical Working Group (A09a,c,d)	9:15 – 10:30
<i>Break</i>	10:30 – 10:45
4. Review Study Plans/Requests: updates on A01a/b (A26b), A14, A16, A17, A24	10:45 – 12:00
<i>Lunch (meeting snacks or bring your own)</i>	12:00 – 12:30
5. Review Study Plans/Requests: updates on A25, A26a, A29, A36, A37, A38, A39 Others?	12:30 – 1:45
6. Action Items	1:45 - 2:00
7. Update from Solution Team Meeting	2:00 - 2:15
8. Additional Issues	2:15 - 2:30
9. Set Agenda for April 10 th 2003 (WA DOE, Bellevue)	2:30 - 2:40
10. Evaluate Meeting	2:40 – 3:00

March 13, 2003



Driving Directions to US Forest Service Office:

- 1) Driving North from Seattle (or South from Everett) on I-5, take the 220th St. SW exit (exit 179).**
 - 2) Turn west (right if from southbound I-5, left if from northbound I-5) onto 220th St. SW.**
 - 3) Drive west about a block and turn right onto 64th Ave W.**
 - 4) The office building is about ¼ block down the street on the right side of the road.**
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Aquatic Resources Working Group

March 13, 2003
8:30 a.m. - 3:00 p.m.
USFS Building, Mountlake Terrace, WA

MEETING NOTES

***Aquatics Working Group Mission:** "To identify issues and develop solutions and recommendations addressing fish and aquatic resource interests related to the Baker River Project and its operations, leading to a settlement agreement."*

Fish Team Leader: Arnie Aspelund, 425-462-3442, arnie.aspelund@pse.com

PRESENT: Arnie Aspelund, Nick Verretto, Cary Feldmann (PSE), Arn Thoreen (Skagit Fisheries Enhancement Group), Sue Madsen (R2), Bill Reinard (Wildcat Steelhead Club), Steve Fransen (NMFS), Bob Wright and Rod Sakrison (DOE), Gary Sprague (WDFW), Gene Stagner (USFWS), Ruth Mathews (The Nature Conservancy), Stan Walsh (Skagit System Cooperative), Brady Green and Scott Lentz (USFS), Marc Daily (Meridian Environmental, Inc. for The Louis Berger Group), Dee Endelman (Agreements Dynamics), Lyn Wiltse, facilitator and Mary Jean Bullock (PDSA Consulting, Inc.).

AQUATICS WORKSHOP AT BAKER LODGE

April 1, beginning at 9:00 and lasting until 5-ish on April 2. Dress casually and bring musical instruments! See the draft retreat agenda under the Settlement Process discussion below.

FUTURE WORKING GROUP DATES AND LOCATIONS (2nd Thursday of each month):

April 10 (WA Ecology, Bellevue-Eastgate), May 8 (WA Ecology, Bellevue-Eastgate), June 12, July 10 (WA Ecology, Bellevue-Eastgate), August 14, September 11 (TBD), October 9, November 13, December 11, 2003 from 8:30-3:00 at USFS Office in Mountlake Terrace.

March 13, 2003 Agenda

8:30 – 3:00 p.m. at USFS Building in Mountlake Terrace

1. Review Agenda and Minutes

2. Review Relicensing Schedule
3. Settlement Process – Workshop debrief
4. Fish Passage Technical Working Group Report
5. Instream Flows Update (A9)
6. Studies:
 - A9d - Skagit River Flow & Habitat Assessment
 - A14 - Reservoir Shoreline Erosion
 - A16 - Lower Baker Delta/Channelization
 - A17 - Tributaries Surveys Upstream of Barriers
 - A25 – Inventory of Unnatural Predation Opportunity
 - A26 - Reservoir Production Potential
 - A29 - Sockeye Smolt Incubation Origin Otolith
 - A36 - Native & Wild Inland Fish Population Assessments
 - A37 - Evaluation of Aquatic and Riparian Habitat under Without Project Alternative
 - A38 - Bull Trout Population Assessment
 - A39 – Native Non-Salmonid Fish
 - A40 (?) – Chinook-related Study
7. Action Items
8. Update from Solution Team Meeting
9. Additional Issues?
10. Set agenda for April 10, 2003 meeting (@ WA Ecology, Bellevue-Eastgate)
11. Location for May 8 meeting (@ WA Ecology, Bellevue-Eastgate)
12. Evaluate meeting

INTRODUCTIONS

Brady Green of the U.S. Forest Service introduced Scott Lentz who will be his replacement as Brady will be retiring soon.

NEW ACTION ITEMS

- ALL: Consider additional data needs for April 1,2 retreat and let Arnie know ASAP
- Cary: Get HYDROPS runs (Stage, 6", Amplitude, cycling) out to Working Groups by week of March 24th)
- Arnie: Send out list of all requested HYDROPS runs to Working Group members along with a recommendation of how to prioritize the runs by March 14 (*completed list of initial runs March 26th*)
- Brady: Bring Forest Service mosaic of aerial photos of low reservoir levels
- ALL: Bring musical instruments
- ALL: Let Sue know how you prefer to get the reports (hard copy, CD, etc.)
- Arnie: Check with Asit re: incorporating Resident trout into his analysis (*in reference to studies A26a/b*)
- Sue: Work on producing map including above barriers habitat in time for the retreat (*in reference to studies A37 and A17*).
- ALL: Review A24 report and get comments to Sue by end of April.

- ALL: Sent Stan comments on E03 (Examination of Spawning and Incubation Flows in the Skagit River below the Baker confluence in the Brood Year 2000) by January 31. The Economic Working Group will discuss this in April.
- Mark: Send out the revised Study Request on A36: Native & Wild Inland Fish Population Assessments (prior to our February meeting) for discussion at our March meeting.
- Mark: Send out the revised Study Request R-A38: Bull Trout Population Assessment & Risk Analysis
- Mark: Get Emily juvenile density for multiple age classes in the Sauk.
- ALL: Get comments on Large Woody Debris report (*A20*) to Phil by April 1st.

REPORT ON OLD ACTION ITEMS

- Nick: Talked with Stan re: A29.
- Nick: Sent Ruth downstream passage option criteria.
- Phil: Emailed Large Woody Debris report to Arnie to distribute by February 14 (including a cover letter identifying opportunities).
- Phil: Created a matrix of non-salmonids with relation to project effects and distributed by next meeting.

REVIEW RELICENSE SCHEDULE

There were no substantive changes to the schedule since our last meeting. We are on the critical path. Time is of the essence and FERC has announced that they won't be granting extensions.

SETTLEMENT PROCESS – UPDATE

At the cross-resource workshop last week, we learned that FERC is requiring us to submit the Settlement Agreement along with the license application on April 30, 2004. They are talking no extensions.

We will do a retreat at the Baker Lodge, April 1 and 2 to work on creating a second draft of proposed actions. The aim of this retreat would be: fleshing out the details of proposed actions that are a high priority for evaluation in the PDEA. This would include identifying a range of alternatives that would meet the interest of Working Group members. It would also be helpful to note areas of potentially high agreement along the way (at least areas where there doesn't appear to be a lot of conflict).

We would leave with a prioritized list of areas to address/conflicts to work through.

Materials and Supplies for Retreat:

- Input from other Working Groups
- GIS maps
- A37 maps
- Study results
- Photos
- HYDROPS model and output form model
- Projector and electronic version of draft proposed actions

DRAFT AGENDAS FOR BAKER LODGE RETREAT

April 1, 2003

8:30-9:00 Arrive/Get settled/Continental breakfast
9:00-11:00 Finish walking through draft proposed actions
11:00- 11:15 BREAK
11:15-12:15 HYDROPS runs/output/discussion
 Instream Flows – Update on A9a
 Ramping, cycling, amplitude
 Identify additional model runs?
12:15-1:00 LUNCH
1:00-3:00 Complete HYDROPS discussions
3:00-3:15 BREAK
3:15-4:15 Connectivity (IntraBasin movement)
4:15-5:15 Water Quality- Stream and Reservoir
5:15-6:15 p.m. DINNER (with PDB)
7:00-8:30 p.m. Continue Water Quality discussions

April 2, 2003

7:30-8:00 Hot Breakfast
8:00-9:30 Fish Propagation
9:30 – noon Downstream Fish Passage
12-12:45 LUNCH
1:00-3:00 Habitat- Large Woody Debris/Sediment

INSTREAM FLOWS UPDATE (A-9)

R2 reports they should have A9c *report done* in next week (*A09a field work may supercede deadline*). *Will try to get* A9d out by March 24. Phil is in the field now, waiting for flows to come down so he can get the remaining transect data over the weekend.

FISH PASSAGE TECHNICAL WORKING GROUP REPORT

The group is continuing to rank various options according to set criteria. There is a high degree of uncertainty about the biological implications of the current system and various alternatives being considered. The potential cost exposure is also very high (from \$20 Million to \$220 Million)

Our Settlement Agreement could contain performance standards along with a process to achieve them. Absent a Settlement Agreement, we would have prescriptions that speak only to facilities. They will meet next week to continue discussions.

UPDATE FROM SOLUTION TEAM

The Solution Team spent most of their meeting discussing a draft outline of what our settlement agreement process might look like. They also reviewed the goals of the cross-resource workshop March 4-6. During the FERC conference call, the issues of schedule (no extensions granted) and flood control were raised.

STUDY REQUEST SUBMITTALS/STUDY PLAN DEVELOPMENT

Study #	Title	Notes/Next Steps
A01.A	Reservoir Tributary Habitat Surveys	Emily's tributary, habitat and biological report is

	being reviewed by Phil. Sue will try to see that we get to see this before our April 1 and 2 retreat. She will bring GIS maps to the retreat.
A01.B Reservoir Tributary Biological Surveys	See report for 101.A. ACTIVE
A01.C Reservoir Tributary Delta Surveys	See report for 101.A. ACTIVE
A02 LB River Habitat Mapping	Sue reported that this existing conditions report will be out before the end of the month.
A03 Reservoir Fish Population Characteristics	Not discussed. No action yet. PSE will review existing information for the PDEA.
A04 LB/Skagit River Flow, Gaging	Not discussed. Last meeting Phil reported that they downloaded pressure sensors last and are still in the process of collecting data. Links to A9. ACTIVE
A05 Water Quality Sampling	Not discussed. Data collection underway as per Study Plan. This study will be ongoing through Spring, 2004. Hoping to have all requirements fulfilled for Water Quality Certification.
A06 UB Passage Design Baffle Modification	Complete.
A07 Lower Baker Forebay Bathymetry	Complete.
A08 UB Passage System Evaluation	Complete.
A09A Skagit River Flow and Habitat Assessment	Sue reported that Phil is currently out in the field waiting for flows to subside so he can try to get the rest of the transect data we are missing. We will get an update at our April retreat.
A09B Salmonid Redd Selection and Maintenance in the Middle Skagit in Response to River Fluctuation from Hydropower Peaking	Not discussed. Adam is researching what type of spike in flow over what window of time is required to influence spawning behavior. R2 will continue to look at this when PSE resumes a regular operating schedule.
A09C Distribution, Timing and Depth of Salmonid Redds	Not discussed. PDEA contractors have requested a description of life history and timing of spawning for all species. These data will be out prior to our March meeting for discussion. <i>(we are expecting draft report for distribution by April 1)</i>
A09D Distribution, Timing of Salmonid Fry	Not discussed. After our January meeting, Phil got 2001 and 2002 WDFW Mt. Vernon screw trap data. They are integrating this into a report to be out in the next couple of weeks (including scoop trap and Baker trap data).
A10 Baker River Delta Habitat Assessment-Char	Complete. Note: USFWS is concerned with impacts to char and indirectly to bald eagles through chum and also to cutthroat.
A11 Nutrient Addition	Tie to A26.
A12 Instream Flows for Bio-diversity	Split between R-A21 & R-A09.
A13A Water Quality Impacts of Human Uses	Not discussed. Removed from list of studies this

of the Reservoir and Adjacent Shorelines.	group will address, reported by Brady in September. Greta reported the USFS will pursue this in the recreation working group.
A13B Water Quality Impacts on Aquatic Habitat	Removed from list of studies we will address. Tabled for now. Awaiting results of A14a.
A14A Reservoir Shoreline Erosion	Arnie reported that the draft report for this will be out in the next week so we have time to review it prior to our April 1 meeting. (<i>we are expecting draft report by April 1</i>)
A15 UB Delta Scour	Not discussed. Field work is complete. Hope to have the report in March 2003.
A16 Lower Baker River Alluvial Fan Assessment	Sue <i>and Devin Smith of SSC</i> met with folks working on the Little Baker <i>Side Channel Restoration</i> Project to identify synergies. By April 10, she'll get us a draft of the Study Plan including potential PME alternatives and a description of what type of analysis we'll be doing for each and what outputs we might expect.
A17 Tributaries Surveys Upstream of Barriers	We agreed that as a first step, we could use existing GIS maps to get at resident trout habitat. A37 will include what trout production would be without the project. We could extend it to have Asit do some analysis of existing reservoir production potential of resident trout. This means doing steps 1-7, and 9 now (according to the March 11 handout from R2: Effects of the Baker River Project on Resident Trout Potential Analysis Procedure). Based upon these data we could discuss what next steps are appropriate for the future. Brady appreciates R2's effort on this..
A18 Baker River Survey Upstream of 1 km.	Merged into A01a and A01b. ACTIVE.
A19 Review Limnological Information	This study has been combined with A26.
A20 Large Woody Debris Management	Sue asked members to review suggestions in Phil's cover letter for discussions at the April 1, 2 retreat.
A21 Skagit Wild & Scenic River Values	This is being addressed by A9 and A24.
A22 Baker Lake Trout Impacts Evaluation	No longer necessary due to change in management direction in favor of cancellation of non-native trout stocking in the reservoirs. Removed from list of studies we will consider.
A23 Baker River Wild & Scenic River Values	This is being addressed through A15.
A24 Hydrologic and Geomorphic Analysis	Sue distributed the Hydrology (IHA) portion of this report. It compares current project operations with unregulated flows. This is an effects analysis. It is not predictive. This provides a good place to start

	<p>identifying what we might want to explore through the HYDROPS model. We can <i>assess various HYDROPS using the IHA model to compare various alternatives</i>.</p> <p>Note: Time periods and parameters are flexible. Let Sue know if you want to see something else to run through the IHA model.</p> <p>This <i>report</i> will be shared with the Economic Working Group, the County, etc. Please give your comments to Sue by the end of April, 2003.</p> <p>Part 2 of this report.- Sediment Transport and Channel Response will be out by end of April.</p>
A25 Unnatural Predation	<p>Nick reported that we are currently investigating unnatural opportunities for predation in four sites. Ten samplings have been completed of fry releases (March-May is the time frame for these releases). These samplings are taken every four days throughout the time frame. We are also sampling smolt migration. This study is being combined with resident trout and bull trout surveys. We are fin clipping everything but the sculpin.</p> <p>It looks like a few sculpin will have to be sacrificed.</p>
A26A Reservoir Limnology-Production Potential	<p>The draft report is due out by the end of March. The Water Quality analysis is complete. Some data (phytoplankton) gaps have been identified. This will be reflected in the reports along with specific recommendations for future studies (may need to be included in adaptive management).</p>
A26B Tributary Production Potential	<p>Results combined in the report for A01a and A01b and expected by the April 10 meeting.</p>
A27 Middle Skagit Incubation Flows	<p>Addressed in A9.</p>
A28 Fish Passage-Reservoir Management	<p>Now addressed in Fish Passage Studies A30 to A34. ACTIVE</p>
A29 Estimate Sockeye Production from Different Incubation Sources	<p>This year, we have sockeye emerging out of Beach 3 and 4. For now, we have agreed to collect and preserve 100 samples. We can determine what to do with them latter on (otolith analysis).</p>
R-A30 Near-Field Smolt Behavior	<p>Completed. Coordinated through Fish Passage Tech. Group.</p>
R-A31 Fish Passage-Far Field Smolt Migration	<p>Completed. Coordinated through Fish Passage Tech. Group.</p>
R-A32 Fish Passage-Kelt Radio telemetry	<p>Completed. Coordinated through Fish Passage Tech. Group.</p>
R-A33 Fish Passage-PIT Tag Migration	<p>Completed. Coordinated through Fish Passage</p>

	Tech. Group.
R-A34 Fish Passage-Downstream Run-Timing Correlation	Completed. Coordinated through Fish Passage Tech. Group.
R-A35 Fish Passage-Upstream Run-Timing	Completed. Coordinated through Fish Passage Tech. Group.
R-A36 Native & Wild Inland Fish Population Assessments	As part of the bull trout and resident trout studies, we are taking tissue samples. We will also be taking samples from the fish traps. Nick will follow up with Mark re: the number of samples needed. Tissue sampling continues...
R-A37 Without Project Alternative (evaluation of Aquatic & Riparian Habitat)	Sue walked us through a presentation of the where we are with this study. The emphasis was using data on historic aquatic habits to predict future potential aquatic habitats. It also provides a semi-quantitative description of aquatic habitats that would be present under various future operating scenarios: ongoing operations, dam decommissioning, and ongoing flood control without project. Members seemed reasonably comfortable with the assumptions as introduced that R2 is making for this study. She will bring tables/maps to our April 1 st .
R-A38 Bull Trout Population Assessment & Risk Analysis	This is underway. We will discuss April 10 th .
R-39 Native Non Salmonid	Phil prepared a paper on what species are in the Baker River Project basin and what their habitat is. We will look at linking this to A1, 2, 9, 15, 16, 24, 37, 17, 26b and fish passage. Sue and Phil will follow up with Ruth on how to handle this. <i>(Brady emailed that the USFS has comments to make on this paper)</i>

HANDOUTS

- Agenda for 3-13-03 meeting
- Final Minutes from 2-13-03 meeting
- Long-term Aquatics Schedule
- Updated Aquatics Study Request Index
- Updates Aquatics Study Index
- Effects of the Baker River Project on Resident Trout Potential Analysis Procedure – Prepared by R2 Consultants, March 11, 2003
- Effects of Baker River Project on Native Non-Salmonid Fishes, Aquatic Study Request – A39---Reconnaissance level Analysis – R2 Resource Consultants, March 10, 2003
- Hydrology and Geomorphology of the Baker and Lower Skagit Rivers (Study A-24) – Part 1 of 2), PART 1 – Hydrology –draft report

- A37 *Power Point Presentation/Report*: Future Potential Aquatics Habitats within the Baker Project Area

PARKING LOT

- State agency presentations re: mandates (agency direction)
- Create a master list of possible studies across all working groups and share with all
- Access to the Baker River Project hourly operational model (Charles Howard)
- Participate in Lower Skagit Work Group for native char
- Create Overall “Study Plan” for Studies that will drive the Relicensing Process
- Address Trap & Haul – other species
- *PSE agreed to take over the Little Park Creek smolt trapping effort this year. Implementation is underway.*

EVALUATION OF MEETING

Well-Dones

- Gary and Steve actually remembered to pick up Gene today!
- Sue’s A37 presentation
- Great progress on studies/results
- Arnie’s food-
 - Predation opportunities
- Got a plan for 2-day Retreat (April 1 and 2)
- Lyn’s joke
- Sue’s “Blowing past” dam removal

What Needs to Be Changed

- Too much time planning for 2-day Retreat
- Lyn’s joke

What’s Hot?

- In-stream flows
- Planning for 2-day Retreat: April 1 and 2
- Downstream Passage

Studies Update for Solution Team

Made progress on:

- A17 – Tributary surveys above barriers
- A39 – Native Non-Salmonids
- A24 – Hydrologic part of Hydrologic and Geomorphic Analysis is out
- A37 – Evaluation of Aquatic and Riparian Habitat under Without Project Alternative
- A9 – We hope to get the remainder of the instream flow data soon!

Tentative April 10, 2003 Agenda

8:30 – 3:00 p.m. at WA Dept. of Ecology, Bellevue – Eastgate

1. Review Agenda and Minutes

2. Review Relicensing Schedule
3. Settlement Process – Status of 2nd draft proposed actions after April 1, 2 Retreat
4. Fish Passage Technical Working Group Report
5. Instream Flows Update (A9)
6. Studies:
 - A01(a,b)/A26 (b) – Reservoir Tributary Surveys
 - A2 – LB Habitat Mapping
 - A5 – Water Quality Sampling
 - A9 (a,b,c,d) - Skagit River Flow & Habitat Assessment
 - A14 - Reservoir Shoreline Erosion
 - A15 - UB Delta Scour
 - A16 - Lower Baker Alluvial Fan Assessment
 - *A17 – Tributaries Surveys Upstream of Barriers*
 - A20 – Large Woody Debris Management
 - A24 - Hydrologic & Geomorphic Analysis
 - A25 – Inventory of Unnatural Predation Opportunity
 - A26 (a) - Reservoir Production Potential
 - A36 - Native & Wild Inland Fish Population Assessments
 - *A37 – Evaluation of Aquatic/Riparian Habitats (Without Project Alternative)*
 - A38 - Bull Trout Population Assessment
7. Action Items
8. Update from Solution Team Meeting
9. Additional Issues?
10. Set agenda for May 8, 2003 meeting @ WA Ecology, Bellevue-Eastgate
11. Evaluate meeting