BAKER RIVER PROJECT RELICENSE

Aquatic Resources Working Group
Technical Sub-committee on Instream Flows
Technical Sub-group

May 13, 2002
9:00 a.m. – 3:00 p.m.
Washington Department of Ecology
(Room R2B-18)
300 Desmond Drive
Lacey, Washington

DRAFT MEETING NOTES

Fish Team Leader: Arnie Aspelund, 425-462-3442, aaspel@puget.com

PRESENT: Arnie Aspelund (PSE), Cary Feldmann (PSE), Thom Hardy (Watershed Systems Group), Hal Beecher (WDFW), Brad Caldwell (DOE), Phil Hilgert (R2), Stan Walsh (SSC), and Larry Wasserman (SSC)

Note: If unable to attend meetings, please notify Team Leader. If something comes up on the day of the meeting, call Lyn at her new cell phone number: 425-890-3613.

FUTURE DATES AND LOCATIONS: A technical sub-group meeting consisting of Phil Hilgert (R2), Hal Beecher (WDFW), Brad Caldwell (DOE), Thom Hardy (Watershed Systems Group), Cary Feldmann (PSE), Stan Walsh (SSC), and if available, Steve Fransen (NMFS) will meet at R2's Redmond, Washington office on July 8th to provide comments on a draft study plan before the next Aquatics Workgroup meeting.

AGENDA
May 13, 2002
9:00 a.m. – 3:00 p.m.
Washington Department of Ecology
Lacey, WA

0900 – 09:15		Review meeting objectives and agenda
0915 – 1015		Discuss ongoing instream flow-related relicensing studies. Do they satisfy information components identified during April 22 meeting?
1015 – 1030	**Break**	
1030 - 1200		Review list of potential study tasks to resolve instream-flow related issues
1200 – 1230	**Lunch**	
1230 – 1400		Continue discussion of potential instream flow study tasks
1400 – 1430		Next step (Cary)
1430 – 1500		Schedule and set agenda for next meeting

MEETING HANDOUTS

- Meeting Agenda
- Map of Middle Skagit River (Baker River confluence to Sedro Woolley) adapted from WDF Stream Catalog (Williams et al. 1978)
- List of Aquatic Resource Studies under consideration during Baker Project Relicensing (Appendix D of the Biological Assessment of Interim Baker Project Operations)
- Table of Instream flow information components and potential sources of information to resolve flow-related issues for relicensing (adapted from 4/22/02 instream flow meeting).

MEETING OBJECTIVES

- To review ongoing studies associated with current Baker Relicensing activities related to instream flow
- Evaluate whether existing and ongoing studies satisfy information components identified in the April 22nd technical meeting
- Consider what information will be needed (what additional study tasks) to resolve instream flow related issues for the Baker River Relicensing.

ONGOING STUDIES

Since Brad, Hal, Larry and to some extent Thom, had not participated in earlier Hydrology and Aquatic Resource Working Group Meetings (HARWG), Phil reviewed the aquatic resource studies now under consideration as part of the Baker River Project Relicensing process. Phil reported on the progress of studies A09a, A09b, A09c, and A09d on the middle Skagit River. He also pointed out other instream flow related study requests /study plans (e.g., large woody debris, Hydrologic & Geomorphic Analysis, biodiversity, etc.). These are labeled as A02, A04, A12, A16, A20, A24, A27 (see summary table for title, status and objective of study/study request).

INSTREAM INFORMATION COMPONENTS

Phil led us through a review of the Instream Information Components Table having 10 physical habitat and biological information component groups from the April 22nd meeting. Participants at the April 22 meeting had filled in the three left columns of the table. Phil subsequently modified and filled in the remaining portions of the table not covered in the April 22nd meeting. The table lists the instream flow information components derived by the group and whether the information is needed to support a settlement agreement or would be needed to alter default conditions. The third column lists what existing information or relicensing studies already address that information component.

The group noted continued confusion regarding the phrase "to alter default conditions" in the second column. In response to Stan's suggestion, Phil added an additional column in the table entitled "Information used to support terms and conditions" and modified the phrase "default conditions" to reflect "information that is needed in the absence of a settlement".

Phil suggested that the focus of the meeting should be to identify which methods can be used to provide information that the group believes is necessary to address Baker Relicensing instream flow issues. Throughout the meeting participants should strive to identify under what conditions they would or would not believe the study information would be used.

Phil believes PSE can develop a flow management proposal that can be evaluated and "gamed" using the Chuck Howard model. A flow management plan was developed as part of the baker Project Biological Assessment that primarily addressed chinook spawning and incubation. A draft plan that is not necessarily constrained by existing equipment limitations could be developed as part of long-term relicensing proposal. For instance, Cary stated that PSE is planning to modify/add units to meet State ramping guidelines. A draft flow management proposal could be developed to address the variety of species and ecosystem protection interests of the larger group. Subsequent discussion and negotiations regarding the benefits of alternative measures will help identify study priorities.

Phil then went through the instream flow components table and explained how he filled out the table according to his personal interpretation of which methods provide the information. The issue of altering default conditions came up when Cary asked whether we need to understand the effects of wave attenuation and travel time if PSE agrees to adhere to the State ramping guidelines? Several participants commented that understanding the changes in load-following flow patterns in a downstream direction, and understanding the interaction of Baker and Skagit Project (FERC No. 553) operations may allow PSE to develop a flow management plan that exceeds ramping rate criteria within the Baker River, meets state criteria within the mainstem Skagit River and allows PSE to load-follow at least some of their capacity.

After a break, Thom said he took a cut at filling in the table, taking the various methods starting from the right columns and answering if they answer the needed information. Thom believes it will take a combination of empirical data and modeling to get the answers and stay within the overall relicense schedule. He suggested the group attempt to work through the table and see where there is agreement.

Flow Fluctuation:
The study plan should provide details (method, schedule, and cost) of developing an unsteady flow model of the Skagit River between the Baker confluence and Sedro Woolley. The model should be along the lines of what is described in the column C heading.

Salmonid Spawning:
The group consensus was that while a full-blown PHABSIM model (1D or 2D) may not be needed, some modeling should be conducted to look at spawning habitat versus flow. Since the unsteady flow model involves transect measurements, a couple of transects could be added at key spawning areas to provide a rough index of spawning habitat versus flow. Any modeling effort should be integrated with empirical measurements of redd construction. Modeling and empirical data collection cannot be divorced of each other.

Salmonid Incubation:
The group expressed a desire to add "Scour Potential" to the information components list. Assuming an unsteady flow model of the mainstem Skagit River will be developed, R2 should evaluate what it would take to incorporate an analysis of the flow level that initiates scour into the study approach. Stan noted that flood control is an important information component.

Downstream Migration:
Phil will review the Skagit screw trap data from Dave Seiler-WDFW to see how it might provide some insight into information needs. Does WDFW record the capture of marked releases from the Baker Project?

Upstream Migration:
The group consensus was that there are no physical barriers under low flow conditions in the mainstem Skagit channel, although there side channel inlets may hinder upstream passage into off-channel habitats under low flow conditions.

Water Quality:
Phil is to review the scope of existing A05 to see if it addresses what is needed. One issue that is indirectly related to instream flows is the potential attraction of adult salmonids into the Baker trap due to cool water releases from Lower Baker Dam. Montgomery Watson/Harza was looking into adult trap counts versus environmental variables and PSE will see if they considered this possibility.

Biodiversity:
Thom noted that the USFS will be looking for some type of spatial niche analyses, but he did not see the need for a major effort. The information needed should be available as an extension of data collected for other purposes.

Little Baker River:
Phil will have Sue Madsen-R2 contact the Corps to identify what studies the Corps will be undertaking this summer and next. If the Corps study efforts are stopped due to lack of funding or lack of a local sponsor, Study A-16 will be expanded to at least identify where the Little

Baker River channel intersects the mainstem Baker channel. The group also requested that A-16 should look at what flow initiates movement of gravel-sized sediments in the Lower Baker River.

NEXT STEPS

The group requested that Phil develop a study plan that incorporates the thoughts and decisions of this group. Brad suggested that an integrating empirical with some physical modeling would be most desirable from his perspective. Phil was encouraged to look at synergies and efficiencies in developing a study program. If a little more effort will allow a lower priority issue to be addressed, they should consider the benefits of the more comprehensive program, even if the study element might not be justified on its own. The group suggested that they meet again as a small group to review what Phil will develop, but before the next meeting of the larger Hydrology and Aquatic Resources Workgroup. When a draft study program is prepared, it should be sent to NMFS and the USFWS to try and engage them in the discussion.

Based on various vacation schedules, Phil will try to submit a draft study plan by June 17th. This would give the group about a week to review and get comments to Phil by June 26th. The small workgroup will then meet on July 8th at R2 Resource Consultants, 9:00 a.m. - 2:00 p.m. to review the plan before distributing it at the July 11th meeting of the HARWG.

Meeting adjourned.