BAKER RIVER PROJECT RELICENSE

Instream Flows Technical Working Group

January 7, 2004
9:00 a.m. – 3:00 p.m.
Puget Sound Energy
Camelot Conference Room, 2nd floor (425-424-6550)
19900 North Creek Parkway, Bothell, WA

MEETING NOTES (DAY 1 of 2)

Teamlet Leader: Arnie Aspelund, 425-462-3223, arnie.aspelund@pse.com

Name	Organization	Name	Organization
Ruth Mathews (phone)	The Nature Conservancy	Jason Shappart	Meridian Envrionmental
Margaret Beilharz (phone)	US Forest Service	Stan Walsh (phone)	Sauk Suiattle Indian Tribe/Swinomish Tribal Community
Brad Caldwell	WA DOE	Gene Stagner (phone)	USFWS
Phil Hilgert, Stuart Beck	R2 Resources	Derek Marks	Upper Skagit Indian Tribe
Arnie Aspelund, Cary Feldmann, Paul Wetherbee	PSE	Gary Sprague, Hal Beecher	WDFW
Chuck Ebel	US ACE (phone)	Thom Hardy	Utah Water Research Laboratory (phone)
Jeff McGowan	Skagit County Public Works	Steve Fransen (phone)	NMFS
Lyn Wiltse, facilitator	PDSA Consulting		

To attend by conference call: Dial 1-866-280-6429. Enter participant code 144995#.

AGENDA FOR JANUARY 7, 2004 MEETING
9:00 a.m. to 3:00 p.m.

Camelot Room, PSE Office, Bothell, WA
9:00 – 9:10 Introductions, review notes, and agenda
9:10 – 10:00 Action Items from Dec. 15 meeting
10:00 – 12:10 Review Instream Flow Proposals
12:10 – 12:30 L U N C H
12:30 – 2:30 Agreement on Constraints
2:30 – 2:45 Additional Issues?
2:45 – 3:00 Set Agenda for January 8, 2004

NEW ACTION ITEMS

- Phil: Follow up with Claire re: Ruth's additional HYDROPS runs
- Phil: Follow up with Stan re; re-running his 50% and 67% incubation flow runs, based on new criteria.
- Phil: Talk with Stan re: complex habitat data
- Paul: Follow up with Steve re: HYDROPS capabilities

REPORT ON OLD ACTION ITEMS

Phil walked us through the new data generated by the action items below, referencing the corresponding files (shown in italics below- hard copies distributed at meeting, plus files emailed to all on Aquatics mail list):

- R2 incorporated the results of analyzing effective spawning width accounting for only dewatering of redds into the summary figures. (*Effective Chinook Spawning Width.010704.doc)*
- R2 sent out data summary supporting spawning suitability figure. (*MSkagit Spawn suitabilityTR1-24-010503.xls)*
- R2 evaluated data compiled in A-09d (Middle Skagit river juvenile Salmonids) and identified the timing of alevin pre-emergence/emergence by species.
- R2 accounted for why transect 12 provided more Chinook spawning habitat than chum and steelhead spawning habitat. (*Spawning Suitability Transect 12.doc)*
- R2 ran the effective spawning analyses assuming that Baker Project releases could be maintained at 4kcfs, 6kcfs, 8kcfs, 10kcfs, 16kcfs, and 32kcfs flows during the peak Chinook spawning period of September 25 to October 31.
- All reviewed the euphotic zone weighting factors as we modified them at our Dec. 15 meeting and agreed that they are fine to use going forward for Baker Lake and Lake Shannon. (*Reservoir temp and zooplankton plots.010604.doc)*
- R2 developed a table of average monthly water temperature in the Middle Skagit River. (*Skagit temp at Concrete-Historical.xls)*
- R2 fleshed out the flow regime diagram (monthly calendar) and sent it out so it can be discussed at the next Aquatics Resources Working Group meeting. (*Instream Flow Considerations.010603.doc)*

BAKER RELICENSING SCHEDULE

We briefly reviewed the schedule of the PDEA requirements to support the April 30 deadline. Key dates are January 16 as deadline for PSE to provide to Louis Berger the Proposed Action for use in the PDEA. January 26 is the deadline to provide Louis Berger definitive operation and

aquatic resource model runs for use in the PDEA. February 9 is the deadline for providing PME cost estimates.

RESERVOIR LEVEL INTERESTS EXPRESSED

Forest Service:
May 23 – Sept.7: min of 724.8 ft. with .5 ft. fluctuation at Upper Baker each day;
May 9 – Oct. 15: 713.8 ft.

Skagit County:
Oct. 15 – Mar. 1 100K acre-feet at Upper Baker and 40K acre-feet at Shannon

CONSIDERATIONS FOR CREATING A MUTUALLY AGREEABLE FLOW REGIME

- We want to make rational biological decisions with the water we have.
- Do we establish instantaneous minimum instream flows at the Baker?
- Do we monitor the Baker and the Skagit Rivers simultaneously?
- Do we monitor the Baker River at the Concrete Gage?
- We should consider flood control (start with existing) and ESA.
- We don't want to create spawning flows that can't be supported during incubation (even if Nature does this?)
- Instead of release on top of inflow, could we use a running average of inflow?
- Try to keep all this as simple as possible (the KISS principle).
- Remember Lake Shannon can act as a buffer.
- Not looking for PSE to mitigate for natural hydrologic conditions; we don't want them to make them worse.
- Instead of release on top of inflow, should we use a running average of inflow?
- Stan reported that the tribes need information on the relationship of complex rearing habitat and Skagit River flow and Baker release as well as off channel habitat before they can enter into discussions of an optimal flow regime.
- Consider incubation flow as a percentage of spawning flow- How can we reduce spawning flows Sept. 10 through Dec. 31 while increasing flows Sept. 10 through Apr. 15?)

WDFW PRELIMINARY TERMS AND CONDITIONS FOR FLOWS

Gary walked us through what he put together in terms of a flow regime in his response to the PDEA. After some discussion, he agreed to add 2,500 cfs as the Maximum Daily Amplitude Change (24 hours). For December, we added 2,500cfs as the Maximum Flow. These additions show up in italics in the table below:

Note: We may also consider adding a Maximum Flow for March, April, and May.

B A K E R R I V E R P R O J E C T F L O W S			
Month	Minimum Flow	Maximum Flow	Maximum Daily Amplitude Change (24 hrs)
January	1,000 cfs		2,500 cfs

February	1,000 cfs		2,500 cfs
March	1,000 cfs		2,500 cfs
April	1,200 cfs		2,500 cfs
May	2,000 cfs		2,500 cfs
June	2,500 cfs /1 /2		2,500 cfs
July	1,800 cfs 1/ 2		2,500 cfs
August	1,100 cfs /1		2,500 cfs
September	1,000 cfs /2 /3	2,000 after the 15th	*2,500 cfs through the 14th*
October	1,000 cfs /2 /3	2,500 cfs	
November	1,000 cfs /3	2,500 cfs /5	
December	1,000 cfs	*2,500 cfs*	

/1 Or inflow, whichever is less.

/2 A minimum flow of 2,000 for a minimum of 4 hrs each day is necessary to provide upstream fish passage form Skagit River to the adult fish trap.

/3 In some years it will be necessary to intensively managers the minimum flows to provide protection for egg incubation during periods of low flow in the Skagit River. During these times management of the Baker Project discharges will be through adaptive management…

/4 The maximum amplitude change to be measured in the Baker River downstream of the Lower Baker powerhouse. The amplitude change is to be measured on a continuous ("rolling") 24-hour basis, not just once per day. The maximum amplitude restriction does not apply at flows over 30,000 cfs in the Skagit River at Concrete.

/5 Maximum flow until Skagit daily flows at Concrete average 20,000 cfs or greater for 7 consecutive days, then no maximum

Note: Gary also included a fifth column also indicating species and life stages present by month.

We agreed to run this scenario (DFW.XX) through the HYDROPS model using the elevations suggested by the Forest Service for May 23 through September 7 for sure, and May 9 through Oct. 15 if possible. We will also include the minimum water quality reservoir elevation at Lake Shannon.

We agreed to rank soft constraints according to the following priority:

#1 Flood Control plus Buffer at Upper Baker
#2 MIF (at Baker River Gage)
#3 Max. Amplitude (at Baker River Gage)
#4 Ramping Guidelines
#5 Baker Lake Reservoir Fluctuation from May 23 – September 7

We agreed to do the following HYDROPS runs (for all five years) overnight to review in the morning:

DFW.01: State Ramping guidelines applied on the Baker River
DFW.02: State Ramping guidelines applied on the Skagit River
DFW.03: "least Restrictive" Ramping guidelines (PSE proposal on ramping)

HANDOUTS

- Draft Meeting Notes from December 15 Instream Flows Technical Working Group
- Draft Agenda for January 7 and 8 Instream Flow meetings
- Baker Relicense Project – Milestone Dates, December 19, 2003
- *Effective Chinook Spawning Width.010704.doc*
- *MSkagit Spawn suitabilityTR1-24-010503.xls*
- *Spawning Suitability Transect 12.doc*
- *FlowReleasesDuringPeakChinookSpawning.doc*
- *Reservoir temp and zooplankton plots.010604.doc*
- *Skagit temp at Concrete-Historical.xls*
- *Instream Flow Considerations.010603.doc*
- Excerpt from WDFW 02 January 2004 letter to the FERC presenting their preliminary terms and conditions for the Baker Rive Hydroelectric Project (Flows/Discharges)

DRAFT AGENDA FOR JANUARY 8, 2004 MEETING

9:00 a.m. to 3:00 p.m.
USFS Building in Mountlake Terrace, WA

9:00 – 9:10 Introductions, review notes, and agenda
9:10 – 9:30 Action Items from January 7 meeting
9:30 – 11:00 Review Output from HYDROPS runs:
- DFW.01: State Ramping guidelines applied on the Baker River
- DFW.02: State Ramping guidelines applied on the Skagit River
- DFW.03: "least Restrictive" Ramping guidelines (PSE proposal on ramping)

11:00 – 11:30 Other Issues:
- Scott Schuyler: Upper Skagit Proposal

11:30 – Noon Other Issues:
- Arn Thoreen?
- Protocol for on/off cycle test next week?

12:00 – 12:30 L U N C H
12:30 – 12:45 Review data on incubation flow as percentage of spawning flow
12:45 – 2:00 Identify other runs/regimes
2:00 – 2:30 Other Issues?
2:30 – 2:45 Identify next steps
2:45 – 3:00 Set Agenda for January 23 RESOLVE Meeting