



BAKER RIVER PROJECT RELICENSE

Aquatic Resources Working Group- Instream Flow Technical Working Group

February 27, 2004
9:00 a.m. – 2:00 p.m.
Puget Sound Energy
Camelot Conference Room, 2nd floor (425-424-6550)
19900 North Creek Parkway, Bothell, WA

AGENDA

Conference Call Number: 1-866-280-6429, participant code: 144995#

1. Review Agenda, Notes from 1.30.04 IFTWG Meeting	9:00 – 9:15
2. Relevant Action Items from February 12 ARWG Meeting	9:15 – 9:30
3. Summary Report from 2.18.04 Conference Call	9:30 – 10:00
4. Revised Summary Comparison Table	10:00 – 12:00
5. Status of New/Revised HYDROPS Runs	
6. Summarize Action/Decision Items	
<i>Break at 10:30</i>	
<i>Lunch (meeting snacks or bring your own)</i>	12:00 – 12:20
7. Next Steps:	12:20 – 2:00
<ul style="list-style-type: none">• Take stock of where we are• Define where we want to be	

February 27, 2004

Driving Directions to PSE Bothell Office:

The address for the Bothell Office is 19900 North Creek Parkway, Bothell, 98011.

Phone number is 425-424-6550. The receptionist will see you, and will let you in, and direct you upstairs to the correct conference room.

Directions:

Northbound: 405 to the 195th Exit. Turn right off the exit. Turn left at the first light, North Creek Parkway. The building is on the right handside.

Southbound: 405 to the 195th Exit. Turn left off the exit. Rest same as above.

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Aquatic Resources Working Group Technical Sub-committee on Instream Flows

February 27, 2004

9:00 a.m. - 2:00 p.m.

Puget Sound Energy Building

Camelot Conference Room, 2nd floor

19900 North Creek Parkway, Bothell, WA

(Call in number 1-866-280-6429, participant number 144995#)

Final Meeting Notes

Meeting Purpose: Develop a process to resolve flow-related issues for Baker River Project relicensing

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

PRESENT: Arnie Aspelund (PSE), Cary Feldmann (PSE), Paul Wetherbee (PSE), Phil Hilgert (R2), Jeff McGowan and Mike Stansbury (Skagit County), Hal Beecher (WDFW), Gary Sprague (WDFW), Jim Pacheco (DOE) on the phone, Ruth Mathews (TNC), Stan Walsh (Skagit River System Cooperative), Margaret Beilharz (USFS) on the phone, Joyce Liu (Powel Group) on the phone, Lyn Wiltse, facilitator (PDSA Consulting), and Dawn Schink, (PSE) note taker.

Next meeting(s):

- ***Instream Flow TWG Conference Call: March 5th conference call to discuss higher-level table that outlines viable flow options within PSE's economic constraints, 10am to noon. Conf. Line # 1-866-280-6429. Participant Code 144995#.***
- ***Aquatics Meeting: March 11, 2004 at PSE-Bellevue in Summit Ridge Conference Room***

Handouts

- Final Meeting notes, February 12, 2004 – Aquatic Resources Instream Flows/RESOLVE meeting
- Graph of Stage Change for Baker River translated to Skagit River at Transect 1.
- Table: Comparison of Economic, Hydrologic and Environmental Effects of Alternative Operational Scenarios for Baker River (Version:02/27/04)

Outstanding Action Items

- Stan: Review Middle Skagit River cross-section profile/LWD.
- Paul: Change SSC to SRC for HYDROPS runs

Status of Action Items from Feb. 12, 2004 Meeting and Feb. 18 Conference Call

- Phil: Have Stuart Beck-R2 translate stage change data to the Skagit River at Transect 1. *A handout was passed out but discussion was deferred to a future meeting.*
- Phil: Post Level 1, 2 analyses of HYDROPS output on the eRoom by February 13. - *done*
- Phil: Update Comparison Table, edit as discussed (description of TNC run, etc.) - *done*
- Paul: Coordinate teamlet conference call on February 18 from 2:00 to 3:00 to put together a couple of additional HYDROPS runs for discussion at February 27 Instream Flows Technical Working Group Meeting. Also, send out the dial-in number so other interested folks can also participate. - *done*
- Paul: Identify the rationale for Lake Shannon pool levels being held to 404.75 fmsl (NAVD 88) June 1 through October 1. - *done*
- Phil: Put together notes from Conference call. - *done*
- Joyce and Irena: Incorporate reservoir evacuation triggers into NMF and TNC runs and evaluate how well they work in maintaining the maximum generation constraints during August through January as specified in the NMF and TNC runs. - *done*

Summary of Feb. 18 Conference Call

Worked through most of the Level 2 output and spent most of the time identifying potential evacuation triggers (i.e., when the Project is 'out-of-hydraulic-control' to incorporate into runs TNC.26 and NMF.03.

Summary Comparison Table (Version: 02/27/04)

Paul described the runs included in the table:

PSE.01 (Existing Conditions): NO CHANGE. This run will be one of three examined in detail as part of the April 2004 NEPA document.

PSE.02-R3 (Draft Action): In response to the Louis Berger folks needing input for the PDEA, PSE capped maximum generation at 4,100 cfs, even though generation capacity was 4,780 cfs. This run will be one of three examined in detail as part of the April 2004 NEPA document.

FS03.B (Run-of-River): NO CHANGE

TNC.26: TNC.25 with the evacuation triggers of 28,000 at the Skagit River near Concrete (24,000 cfs Skagit River above Baker River confluence) and Baker Lake inflow >10 percent exceedance flows.

PSE.19 NO CHANGE

SRC.21: NO CHANGE. This run maintains the two additional turbine (750 and 2,250 cfs) configuration (using all 4 penstocks)

DFW.07: In response to a request regarding additional information on how many units would be needed to meet ramping rates and instream flows of 1,000 to 1,500 cfs, PSE took another look at powerhouse and turbine alternatives. They proposed taking out the 750 cfs unit and keeping the 2,250 cfs unit. This would reduce capital costs by requiring only one additional unit, using three of the four penstocks. The efficiency curve would allow that unit to run down to 1,000 cfs to meet the range of instream flows. This run will be one of three examined in detail as part of the April 2004 NEPA document.

NMF.03: NMF.02 with the evacuation triggers of 28,000 at the Skagit River near Concrete (24,000 cfs Skagit River above Baker River confluence) and Baker Lake inflow >10 percent exceedance flows. This run maintains the two additional turbine configuration (750 and 2,250 cfs, using all 4 penstocks)

Paul and Cary walked the group through the Economic analyses:

- Dependable capacity – is a critical component driving the economic analyses; however, since it requires roughly one person-day per scenario to calculate, the results are not yet available for some runs. Dependable capacity is a function of amount of water in the reservoir plus the capacity to generate during peak demand (i.e., daylight weekday).
- Stan wants it noted he has concerns about the Baker River system shouldering the burden for dependable capacity for the PSE hydropower generation system. Stan thinks Baker’s dependable capacity has come at the expense of natural resources because the Project has no instream flow requirements. PSE staff responded that they are obligated to provide dependable capacity and any reduction from existing conditions would be a real cost item they will have to defend to the WUTC.
- Stan wondered if specific windows of time could be identified when constraints could be relaxed to bolster dependable capacity at minimum environmental risk?
- Mike brought up that the HYDROPS runs appear to be optimized for revenue generation and may not reflect actual operations during the flood control season. For instance, several of the HYDROPS runs show Baker Lake reservoir pool held higher than flood control limits during the flood control season. In reality, Mike believes the reservoir pool would be quickly drawn down after a flood event to the flood control level. PSE staff responded that if a storm event is predicted, the Corps has PSE quickly evacuate the pool (using spill if necessary) to ensure the required flood control volume is available. If a flood event is not predicted to occur, the Corps may let PSE generate to reduce reservoir pool levels – extending the length of time above the flood control level. This real-time management is difficult to model. When the operations assumptions were initially discussed during the HYDROPS set-up, the parties agreed to allow the reservoir pool to be held higher than flood control levels longer than what might be expected under strict interpretation of the flood control levels.
- Are other runs are being hurt because various scenarios are being compared to synthesized “Recent Conditions” (PSE.01) rather than actual operational records? Paul explained the rationale for the synthesized Recent Conditions. Given recent major maintenance activities and the rather short period of record following consistent Skagit River Project operations, PSE believes the synthesized Recent Conditions represent what would occur if PSE operated without a License decision and without IPP measures. This allows a realistic comparison between potential future scenarios.
- Cary stated that PSE’s interests are not satisfied with the economic implications of SRC.21, DFW.07 or NMF.03. They are deal breakers.
- Stan responded that the remaining five (PSE.01, PSE.02R3, TNC.26, or PSE.19) do not meet his interests for environmental protection. Are they at a stalemate?

Agency Caucus

The environmental resource agencies broke for an hour to caucus and discuss next steps. When the entire group reconvened, agency folks summarized:

- The agencies agree to pursue scenarios with a single unit option, but perhaps using speed-no-load or other options to reach a minimum flow of 1,000 cfs. The agency interest is in minimizing the

difference between spawning and incubation flows while meeting ramping rates. They recognize PSE's economic interest. Because we are running out of time, they feel it is time to abandon the approach of tweaking a single variable (in the flow equation) at a time. They would like R2 to suggest an option that meets their interests while also meeting economic parameters that are acceptable to PSE. In response to a PSE suggestion, they indicated they are open to considering whether pushing some of the costs into the future might move us toward settlement.

- Stan says there are still gaps of 1,400 cfs between spawning and incubation flows. He wants to run SRC.21 using speed-no-load to provide a minimum instream flow of 1,000 cfs.
- Ruth suggested that PSE and R2 have more experience with the model runs and she would like them to develop options to achieve goals rather than waiting for the agencies to develop potential solutions.
- Hal says they are looking for creativity for problem solving. There is no time to tweak options one at a time. .
- Gary says NMF.03 is close to what he wants, but it doesn't address all steelhead issues and is expensive. He believes the group is running out of time to adjust the runs and is looking for help to develop solutions.
- Cary asked if agreement could be made where there is a time delay in buying of equipment, say a 10-year delay. Gary would like backup worksheets on economics, what would it cost to do in 5 years and cost in 10 years?
- In response to the suggestion that R2 develop alternative scenarios, Phil suggested that the SRC.21, DFW.07 or NMF.03 runs are "shades of the same color". They provide greater environmental protection than the single unit runs (TNC.26 & PSE.19), but at much greater economic cost. He believes they can continue tweaking the runs to provide minor improvements, but single unit scenarios with minimum flows of 680 cfs will simply not provide the same level of protection available with scenarios with instream flows of 1,000 cfs or greater. The underlying issue is policy-level rather than technical.

Next Steps

- PSE will work with R2 to develop a higher-level table that outlines viable flow options within PSE's economic constraints. In doing this, they will attempt to balance economic, flood control & environmental interests.
- This higher-level table will be discussed during a March 5th conference call, 10am to noon. Conf. Line # 1-866-280-6429. Participant Code 144995#.
- PSE and R2 will work to develop several additional runs that remain consistent with the objectives of the scenario sponsor, but perhaps come closer to meeting the interests of all parties. They will include an SRC.21 run using a single 750 cfs turbine and speed-no-load to meet a minimum flow of 1,000 cfs. These runs will be discussed during the first half of the Aquatic Resources Working Group meeting on March 11th at PSE-Bellevue in the Summit Conference Room.