
BAKER RIVER PROJECT RELICENSE

Aquatic Resources Group

August 9, 2005

9:00 a.m. – 3:00 p.m.

USFS Supervisor's Office

21905 64th Avenue W

Mountlake Terrace, WA

(425) 775-9702

(New conference call procedures forthcoming)

DRAFT AGENDA

1. Review Agenda, Notes, Actions	9:00 – 9:15
2. Operations Topics <ul style="list-style-type: none">• Juvenile Fish Passage Migration Results• Sockeye Return and Distribution, Beach & Artificial Incubation Operations• Fish Rearing Inventories & Releases• Adult Trap Protocol Update or Changes	9:15 – 12:00
<i>Break at 10:30</i>	
<i>Lunch (provided)</i>	12:00 – 12:30
3. Relicense Studies Update <ul style="list-style-type: none">• A-38 Native Char Investigations (prelim. 2005 field results)• A-09 Instream Flow (draft report progress update)	12:30 - 12:45
4. Update on Early Implementation Activities <ul style="list-style-type: none">• Fish Passage Technical WG Report• Fish Propagation Facilities	12:45 - 1:15
5. BRICC Report <ul style="list-style-type: none">• Revisit Meeting Norms for ARG• Review Initial Work Schedule	1:15 - 1:45
6. Confirm Date (Sept. 21) & Agenda for Next Meeting, Evaluate the Meeting	1:45 - 2:00

Baker River Project License Implementation

AQUATIC RESOURCES GROUP MEETING Final Meeting Notes

August 9, 2005
9:30 am - 3:00 pm

USFS Conference Room, Mountlake Terrace, WA

FINAL MEETING NOTES

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

ATTENDEES: Arnie Aspelund, Cary Feldmann, Doug Bruland, Nick Verretto, and Doug Koens (PSE); Phil Hilgert (R2 Resource Consultants); Steve Fransen (NOAA Fisheries); Stan Walsh (SRSC), Jason Joseph (Sauk-Suiattle Indian Tribe); Jeff McGowan (Skagit County); Arn Thoreen (Skagit Fisheries); Chuck Ebel (USACE); Gary Sprague, Rich Johnson, Mike Muller, and Kevin Kurras (WDFW); Scott Lentz (USFS); Stan Zyskowski (National Parks); Gene Stagner and Lou Ellyn Jones (USFWS); Bob Helton (Citizen); Michele Meyers by phone (Upper Skagit Indian Tribe); Mike McGowan (HDR) and Chris Beasley (Quantitative Consultants, Inc.); Lyn Wiltse, facilitator, and Jamie Merrifield, note-taker (PDSA Consulting, Inc).

NEXT MEETING DATES

September 21, 2005 at PSE- (Bellevue)

November 17, 2005 at PSE –(Bellevue)

January 10, 2006 at Mountlake Terrace (location desired but not yet confirmed)

March 14, 2006 at Mountlake Terrace (location desired but not yet confirmed)

June 6, 2006 at Mountlake Terrace (location desired but not yet confirmed)

AGENDA

9:00 – 9:15 Review Agenda, Notes, Action Items

9:15 – 12:00 Operation Topics

Juvenile Fish Passage Migration Results

Sockeye Return / Distribution Beach & Artificial Incubation Ops

Fish Rearing Inventories & Release

Adult Trap Protocol Update / Changes

12:00 – 12:30 LUNCH

12:30 – 1:00 Relicense Studies Update

A-38 Native Char Investigations (preliminary 2005 results)

A-09 Instream Flow (draft report progress update)

- 1:00 – 2:15 Update on Early Implementation Activities
Fish Passage Technical WG Report
Fish Propagation Facilities
- 2:15 – 2:45 BRICC Report
Revisit Meeting Norms for ARG
Review Initial Work Schedule
- 2:45 – 3:00 Confirm Date (Sept. 21) & Agenda for Next Meeting
Evaluate Meeting

NEW ACTION ITEMS

- All – Review the Attendee List to ensure your organization has a designated primary and back-up representative listed.
- Gary – Pull together research done on sockeye juvenile survival related to size.
- Gary – Come up with directive to handle brook trout, coordinate with other co-managers and bring back to the group.
- Kevin – Talk with counter supplier about ability to sandwich counters together to create double-counters. We need to know delivery times and modification requirements.
- Doug – Add footnote to Trap Protocol Sheet re: Char protocol development being in progress.
- Chris – Email your hatchery PowerPoint presentation for Arnie to distribute with these notes.

JUVENILE FISH PASSAGE MIGRATION RESULTS

Doug reported that the Upper Baker and Lower Baker traps were shut down August 2. The Lower Baker gaidenets have been removed; the Upper Baker gulper has been raised up and is undergoing maintenance in preparation for winter. Doug walked the group through the juvenile trap data (see handouts: “Baker Project Juvenile Fish Trap and Haul Results DRAFT” and “2005 UB-LB trap”).

Total juvenile fish passage through Upper Baker was 147,276 and 8,207 at Lower Baker for a total of 155,483. Unmarked sockeye were considerably lower in numbers this year (87,804 at Upper Baker, 91,035 total). The numbers of sockeye fry (9,988) collected this year at Upper Baker increased and these fish were returned to Baker Lake. Their numbers increased toward the tail-off of the sockeye smolt outmigration timing curve. Their size was about 70-80 mm and scale samples from the earliest batch indicated zero-aged fish. PSE is requesting that the co-managers provide a direction for handling these fish (should they be returned to Baker Lake or sent downstream with the smolts) for next season. We may try giving these fish a salt-water challenge next season to investigate their smoltification state in the event that they are similarly high in numbers next season. We may also want to mark or tag these fish. Gary Sprague will bring data about juvenile sockeye survival related to size for our consideration.

Tables distributed on daily counts also included mark-recapture rates from reservoir study groups. Recapture rates at Upper Baker for marked coho ranged from 52-56 percent. This is very similar to what we have recorded over the last ten years. Recapture rates at Upper Baker for marked sockeye ranged from 28-32 percent. Marked sockeye comprise a larger group released in November and a smaller group released in April. The over-winter group continues to have promising survival. This sockeye ad-clip group was released as 50,000 and recovered at 28%; this is viewed as a good rate. PSE has been supporting the operations of the Little Park Creek smolt collection trap in recent years. Final season

recapture rate was the highest recorded at 60%, since the study groups were initiated in 1998. The nearly 20% increase from last year posed the question -could this be the result, at least partially, from the NTS? There have been no other changes to the protocol. Finally, the recapture rates at Lower Baker for marked coho was 32 percent and is within the range of what we have recorded over the last ten years, though this years rate was higher than in recent years. We are using a 250' deep guide net this year instead of the 200' net used last year. Not sure if this has impacted the numbers. There was no spill at Upper Baker this year. All these data can be referred to in the handouts.

Along the lines of species handling protocols at the juvenile traps, Gary Sprague will come up with a directive for brook trout after coordinating with the other co-managers and bring this back to the group. A small number was collected at the Lower Baker juvenile trap. In the bigger picture, PSE suggested the co-managers formalize the protocol for all species to be handled through the juvenile facilities.

	Unmarked Coho	Marked Coho	Unmarked Sockeye	Marked Sockeye	Chinook	Pink	O.mykiss	Native Char	Cut-throat	Other
Upper	34,208	8,220	87,804	15,975	858	0	193	2	13	3
Lower	3,078	1,659	3,231	83	79	0	24	4	9	40
Total	37,286	9,879	91,035	16,058	937	0	217	6	22	43

Final Season Totals

SOCKEYE RETURN AND DISTRIBUTION, BEACH & ARTIFICIAL INCUBATION OPS

Kevin reminded the group about injuries we've seen in the past on some returning adults. PSE found damage in the trap and made repairs and we are no longer seeing any fish injured this year.

We are also seeing really high water temperatures coming out of Lake Shannon (61 degrees when filling the transport tank from water out of the adult trap). They've been adding ice when transporting the fish to bring transport tank waters within 10 degrees difference from the spawning beach water where the fish are released. So far, there has been zero mortality.

The sockeye return reached 3,000 this year. The lower return meant the goal was not achieved for loading the spawning beach and artificial incubation program (reached 60% of the goal this year). We're treating the brood stock twice a week with Formalin trying to keep them in the best possible shape.

Counters are being repaired and calibrated. Kevin brought comparison data on fry counts made in each spawning beach section and from the hopper dating back to brood year 1997. No trend was apparent. Kevin will number each counter to try to isolate the source of the counting issues. (Is there a malfunctioning counter or counters ... or are all counters unpredictably inaccurate?) We discussed various options to try to improve the accuracy of these data. Kevin suggested removing the hopper counter and using it as a back-up. Cary suggested it might be worth considering adding redundant counters (doubling the # of counters). We need to keep in mind what kinds of decisions we are making based on erroneous counter data. Kevin will explore "sandwiching" the counters together and will contact the supplier. Kevin will also get information on delivery of additional counters for back-up.

FISH REARING INVENTORIES & RELEASES

Doug described the inventory of fish at the Upper Baker rearing facility; refer to the "Baker Project Fish

Inventory” handout. Doug walked the group through the status of the fish at the facility and the planned marking groups, release times and locations.

- There are nearly 60,000 sockeye juveniles. We’ll begin clipping them the end of August; 5,000 will be used as a freeze-brand group. Others will be released in late October, early Nov. as ad-clipped sockeye.
- There are 64,000 coho juveniles – three groups of 5,000 will selected for mark recapture studies.
- Brood stock sockeye collection – At 874 (this is low). These are on Formalin drip.
- Received 20,000 rainbow trout from the Arlington hatchery. These fish are doing fine and will be moved in to circulars as soon as they are ready (probably in September). Will release the few remaining rainbow trout left from last year in the near future; they are held back for various fundraising events.

BAKER PROJECT FISH INVENTORY
Inventory date 8/8/2005

location	Species	brood year	population	fish/lb	planned release date and location	comments
Raceway 1	Sockeye	2004	59,874	70	All will be ad-clipped. Fall release group in November to Baker, and spring release of 5k freeze branded to Baker	Clipping scheduled to begin late August
Raceway 2	Coho	2004	64,932	89	All will be ad-clipped. 3- 5k freeze brand groups for mark-recapture studies. Remainder released in spring to Skagit R.	Clipping scheduled for September
(fry trough 1, 2,3) Raceway 3						Empty
(fry trough 4,5,6) Raceway 4						Empty
Trout pond	Sockeye		874			Broodstock for incubation program
Circular 1						Empty
Circular 2						Empty
Circular 3						Empty
Circular 4	Rainbow	2004	20,850	34		Received 7/06/05 from Arlington Hatchery @ 58 fpp
Circular 5						Empty
Vault						Empty
Incubation shed						Empty

Cary requested the co-managers begin considering the program to be developed under implementation of

the future fish propagation measure.

ADULT TRAP PROTOCOL UPDATE OR CHANGES

There were no major changes to the trap protocol. It was clarified that the unmarked Chinook with coded-wire tags (these are mostly non Skagit, hatchery fish) do not need to be taken to Marblemount Hatchery for tag recovery. *Tags from the unmarked Chinook* that are collected are now recovered at the Baker Project.

BAKER ADULT FISH TRAP PROTOCOL
Revised: Sept. 30th 2004

Species	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	
Coho								Transport to Baker Lake . (Up to 200 for brood stock ³). Kill and examine ad-clip + CWT.					
Sockeye						Follow sockeye protocol ²							
Chinook (unmarked-no cwt)						(June1-Aug15) to Baker Lake (springer) (Aug 16-Sept 1) to Skagit River (wild summer/fall) (Sept 2-30th) to Skagit River operc punch (wild summer/fall)				After October 1- to Marblemount until fall broodstock needs are met, then operc punch and return to Skagit River			
Chinook (unmarked+cwt)						to Marblemount for tag recovery (non Skagit hatchery stray)							
Chinook (ad-clip, no cwt)						return to Skagit River operc punch (non Skagit hatchery stray)							
Chinook (ad-clip+cwt)						(June 1-Sept15) kill and examine ⁷				After Sept 16th send to Marblemount (Skagit hatchery fall)			
Winter-run Steelhead	to Skagit River ⁴										to Skagit River ¹		
Summer-run Steelhead						ad-clipped to Baker Lake ⁶ unmarked to Skagit River . ¹				(Sept 1-Oct. 31) to Skagit River ¹			
Pink								to Baker Lake ⁵					
Chum										to Skagit River ¹			
Native Char	to Baker Lake												
Sea-run Cutthroat	to Baker Lake												
Atlantic Salmon	Kill and examine												

¹ All returns to Skagit River released @ Hamilton when possible.

² Sockeye distributed to spawning beaches, Baker Lake, or tribes(SSC) following year specific beach loading plan developed by Baker River Committee.

³ Coho protocol randomly selects up to 200 fish for supplementation program at Upper Baker. Samples taken once per week.

⁴ All returns to Skagit River released @ Hamilton when possible, except adipose-clipped steelhead will be made available for WDFW (Skagit Hatchery Broodstock).

⁵ WDFW decision on 9/19/01 based on meeting Skagit R. escapement goals, prior fish were returned to the Skagit R.

⁶ Hatchery strays available for surplus into the baker watershed for ecosystem needs (June 1 - Aug 31).

⁷ whack and read, until first Skagit Summer or Fall, then to Marblemount.

If we get a lot of pinks that stray into the trap *during fall 2005*, we'll be putting them up at Baker Lake. Doug will alert the co-managers if we get up to 1,000 pinks coming into the Baker Adult Trap. Doug will also add a footnote to the protocol sheet that the development of the char protocol is in progress.

A Time for Honoring Gene Stagner's Retirement and Phil Hilgert's 50th Birthday!



Introduction-Plan



Study-Methods



Test-Results

ARTICLE 101 – FISH PROPAGATION FACILITIES

Arnie reported that a list of rearing criteria was developed based on standard hatchery references, WDFW sources and Baker hatchery information, and we are underway in the production planning which will lead to the point of developing conceptual facility lay-outs this fall. Chris Beasley and Mike McGowan walked us through a PowerPoint presentation of Rearing Criteria and Production Analysis for the Baker hatchery. The aim is for the facility to yield 7 million Sockeye fry with 20,000 pound instantaneous production. This PowerPoint presentation handout will be emailed to the group.

They are aiming to build a facility that will provide maximum flexibility. The size of the site is limited. We do have a good water supply. This includes good pressure, good flow, etc. We need to plan carefully how to transition from the spawning beaches when we work on improving the beaches.

They anticipate being at 15% draft design level by the end of the year.

RELICENSE STUDIES UPDATE:

A-38 NATIVE CHAR INVESTIGATIONS (PRELIM. 2005 FIELD RESULTS)

Phil reported on what has been done through 2005 so far. Snorkeling surveys of the Upper Baker River and Sulphur Creek are set to start this month (August). Doug reported that we are currently gathering biological data on each native char from Baker Lake, Lake Shannon, and Lower Baker River Adult Trap collections. So far this year, we have 43 samples. The plan is to submit them to the WDFW lab along with batches from Marblemount and other parts of the region so they can be processed all at once.

A-09 INSTREAM FLOW (DRAFT REPORT – PROGRESS UPDATE)

Phil reported there has been little progress since our last meeting. We'll get an update from him on this at our September 21st meeting.

FISH PASSAGE TECHNICAL WORKING GROUP REPORT

Nick reported that there have been considerable cost increases (more than doubling projected costs at the time of the settlement). These increases are tied to the size and complexity of the Floating Surface Collector. PSE has responded to this challenge by conducting three types of peer review:

- Value Engineering (VE),
- Engineering Design Review, and
- Independent Consultant Review

Pending the results of these reviews, the last two Fish Passage Technical Working Group meetings have

been cancelled.

The first stage of the VE design review was held a couple weeks ago. The second stage will occur next week. This review is being held concurrently with the two other design reviews. As soon as a design/redesign is selected, the Fish Passage Technical Working Group will resume meeting.

Major contributions to the increased costs included increased cost of steel, amount of steel required, pumps, launch site, etc. Schedule implications are unknown at this point. *Alternative construction and launch methods are being considered.* In the next month, a decision about the launch site will be made. It is unlikely that the Working Group will meet in September, as PSE and Montgomery Watson will be busy conducting constructability reviews of the reports from the VE session as well as the other two design reviews at that time. Nick will keep us posted.

UPDATE FROM JUNE BRICC MEETING

Jamie and Lyn briefly highlighted the June Meeting of the BRICC (Baker River Interim Coordinating Committee) from the meeting notes. Steve Hawking of FERC notified PSE that they will be issuing a DEIS - Draft Environmental Impact Statement - (as opposed to a DEA). Their intent was to issue the DEIS by the end of July; Steve called shortly thereafter to say that they would be late. Due to ex parte rules, he was unable to provide more detail than that. At his suggestion, we have cancelled the scheduled the August 18th meeting; he suggested we keep the September 20th meeting on our calendars. The 30-day comment period will begin when the DEIS is issued.

FERC has a new chairman and is in transition. Steve's best guess at this point is that this delay will not impact the overall schedule. Permitting delays may delay the schedule. Connie Freeland will be trying to set up a meeting for various BRICC members to meet with the Town of Concrete, Skagit & Whatcom Counties, and DOE to review the contents of the Settlement Agreement in hope that this will facilitate the timely issuance of shoreline and other related permits.

HANDOUTS

- Agenda
- ARG June 15, 2005 Final Meeting Notes
- Baker Project Juvenile Fish Trap and Haul Results DRAFT
- 2005 UB-LB trap excel spreadsheet
- Counter Differences 1997 – 2004 and Pond loadings through 8/8/05
- WDFW Public Affairs News Clips: "Trying to solve the mystery of the 200,000 missing salmon," Seattle Times article, 6/22/05
- Baker Project Fish Inventory, 8/8/05
- Baker Adult Fish Trap Protocol, revised September 30, 2004
- Native Char Investigations at the Baker River Hydroelectric Project, Results of 2005 efforts through July 2005, draft August 9, 2005
- Draft BRCC-ARG Norms
- Baker River Relicense Program – ARG Schedule, Status as of 7/31/05

MEETING EVALUATION

What Went Well

- Food !!
- Facility
- Gene & Lou Ellyn attending together
- Hatchery presentation
- Bull Trout Discussion (time well spent on a species that is a priority for some participants)

What to Do Differently

- Ran late
- We'll miss Gene
- Travel time / cost for consultants
- Didn't have PowerPoint handouts
- Bull Trout Discussion (too much meeting time spent on a species that is not a high priority for all participants)

AGENDA FOR NEXT ARG MEETING

September 21, 2005 at PSE-Bellevue (this site was confirmed after the meeting)

9:00 a.m. - 3:00 p.m.

1. Review notes/agenda/action items
2. Operation Topics
3. Relicense Studies Update
4. Update on Early Implementation Activities
5. BRICC Report
6. Other?
7. Confirm Date & Agenda for Next Meeting
8. Evaluate meeting



Passing on the baton to Lou Ellyn.... Best Wishes on your Retirement Gene!