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## BAKER RIVER PROJECT RELICENSE

### Aquatic Resources Group

June 15, 2005

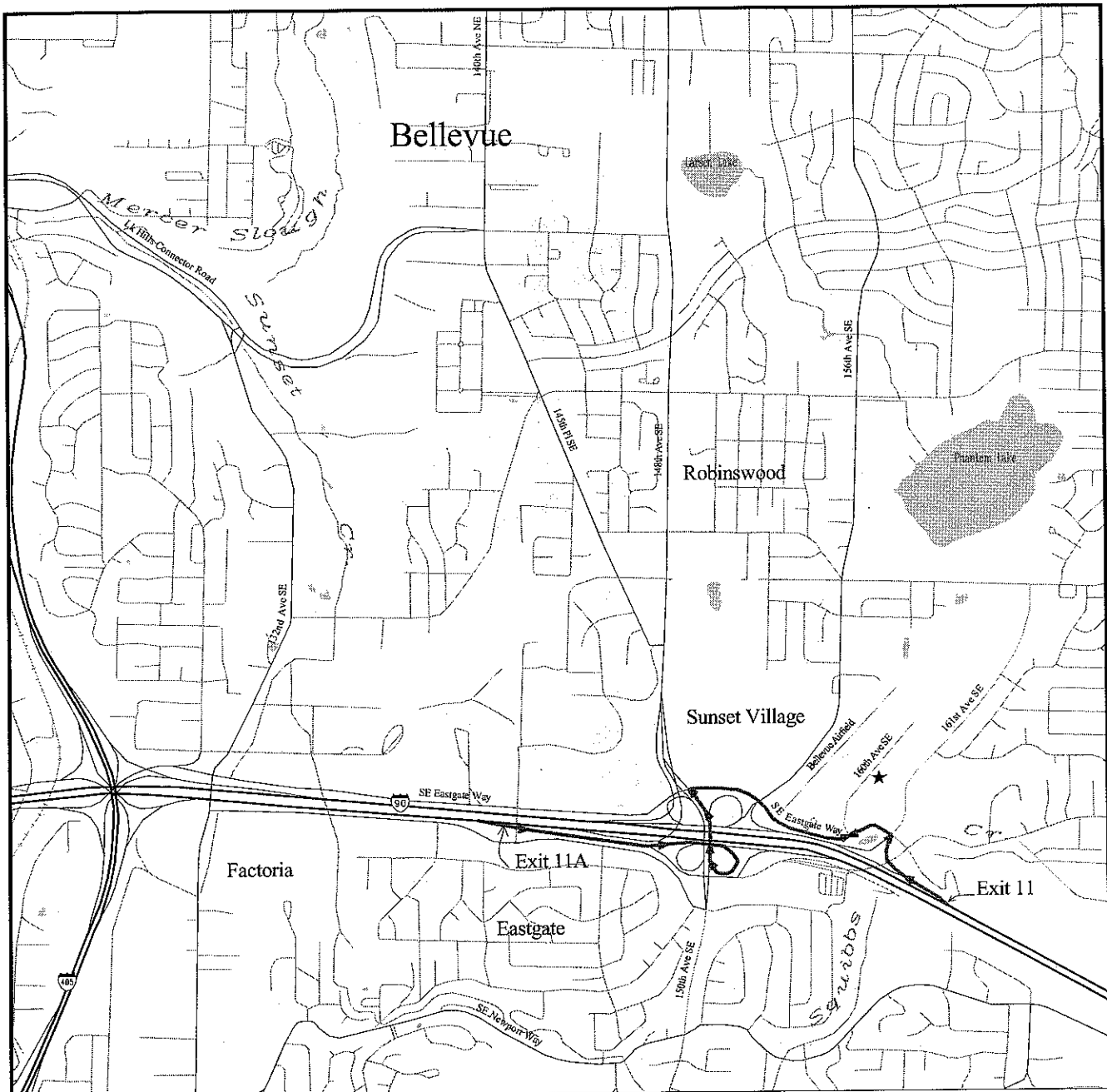
9:00 a.m. – 3:00 p.m.

Location Still to be Confirmed

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

### DRAFT AGENDA

1. Review Agenda, Notes, Actions	9:00 – 9:15
2. Baker River Committee Operations Topics <ul style="list-style-type: none"><li>• Juvenile Fish Passage Migration Update</li><li>• Sockeye Beach Fry Production Results</li><li>• Sockeye Beach Loading Plan</li><li>• Fish Rearing Inventories &amp; Releases</li><li>• Adult Trap Protocol Update or Changes</li></ul> <i>Break at 10:30</i>	9:15 – 12:00
<i>Lunch (provided)</i>	12:00 – 12:30
3. Relicense Studies Update <ul style="list-style-type: none"><li>• A-38 Native Char Investigations</li><li>• A-09 Instream Flow</li></ul>	12:30 - 1:15
4. Update on Early Implementation Activities <ul style="list-style-type: none"><li>• Fish Passage Technical WG Report</li><li>• Fish Propagation Facilities</li></ul>	1:15 - 2:15
5. Revisit Meeting Norms for ARG (going forward) <ul style="list-style-type: none"><li>• Review Initial Work Schedule</li></ul>	2:15 - 2:45
6. Confirm Date & Agenda for Next Meeting, Evaluate the Meeting	2:45 - 3:00



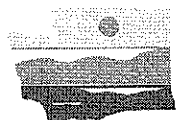
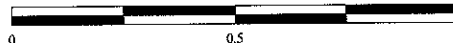
Northwest Regional Office  
 3190 160th Ave SE, Bellevue, Wa. 92556  
 (425) 649 - 7000

Directions East bound on I-90 from I-5 or I-405: Take Exit 11A, keep left, drive past the 150th Ave. SE exit and take the 156th Ave. SE exit. Cross over the freeway and move one lane to the left to avoid the 'exit only' lane. At the first light, turn right onto Eastgate Way. Follow Eastgate to 160th Ave SE (3rd light) and turn left.

Directions West bound on I-90: Take exit 11, 161st Ave. SE and turn left onto Eastgate Way. Turn right onto 160th.

Once on 160th Ave. SE, turn into the third driveway on the right. Beige two story building. Parking in front of the building or one block on the opposite side of 160th Ave. SE.

Scale 1:25,660  
 Miles



WASHINGTON STATE  
 DEPARTMENT OF  
**ECOLOGY**  
 GIS Technical Services  
 02/27/01

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## BAKER RIVER PROJECT RELICENSE

### AQUATIC RESOURCES GROUP MEETING

**June 15, 2005**

**9:00 a.m. – 2:00 p.m.**

**Best Western CottonTree Inn, Mount Vernon, WA  
Fidalgo Room**

### FINAL MEETING NOTES

**Team Leader:** Arnie Aspelund, PSE ([arnie.aspelund@pse.com](mailto:arnie.aspelund@pse.com))

**ATTENDEES:** Arnie Aspelund, Cary Feldmann, Nick Verretto, Doug Bruland, and Doug Koens (PSE); Phil Hilgert (R2 Resource Consultants); Steve Fransen (NOAA Fisheries); Chuck Ebel, (USACE); Mike Stansbury (Skagit County); Jon-Paul Shannahan (Upper Skagit Indian Tribe); Gary Sprague, Rich Johnson, Jed Varney, and Kevin Kurras (WDFW); Scott Lentz (USFS); Arn Thoreen (SFEG); Steve Jennison (WA DNR); Stan Zyskowski (NPS); Lou Ellyn Jones (USFWS); Bob Helton (Citizen); Lyn Wiltse, facilitator and Jamie Merrifield, note taker (PDSA Consulting Inc.)

#### **NEXT ARG MEETINGS:**

**Note:** These will include the Baker Committee meeting operations topics.

August 9, 2005, 9 a.m. to 3 p.m., at USFS Office in Mountlake Terrace

September 21, 2005, 9 a.m. to 3 p.m., at PSE Office in Bothell

November 17, 2005, 9 a.m. to 3 p.m., at PSE Office in Bellevue

**NEXT FISH PASSAGE MEETING:** August 2, 2005

**NEXT BRICC MEETINGS:** July 14 (Tentatively scheduled to review DEIS if FERC issues it in time) and September 20, 2005.

#### **New Action Items**

- Kevin - Look at daily count data for brood years 2003, 2004, & 2005; check to see if the % error is consistent.
- All – Consider fry counting methods and look forward to a discussion at the August 9 meeting
- Jon-Paul - Facilitate co-managers discussions *on adult trap protocols for sampling and handling Chinook. Inform both Kevin and Doug of any changes made.*

- Doug - Change the protocol sheet accordingly (see Action Item above).

## **Agenda for June 15, 2005**

**(9:00-2:00 p.m. Best Western CottonTree Inn, Mount Vernon)**

1. Review agenda, notes, actions
2. Baker River Committee Operations Topics
  - Juvenile Fish Passage Migration Update (PSE)
  - Sockeye Beach Fry Production Results / Artificial Incubation (WDFW)
  - Sockeye Beach Loading Plan (WDFW)
  - Fish Rearing Inventories & Releases
  - Adult Trap Protocol Update or Changes (Group Discussion)
  - Daytime Down-sampling (Stan/Gary)
3. Relicense Study Updates:
  - A38: Native Char Investigations
  - A09: Instream Flow
4. Update on Early Implementation Activities
  - Fish Passage Technical WG Report
  - Fish Propagation Facilities
5. Revisit Meeting Norms for ARG (going forward)
  - Review Initial Work Schedule
6. Set Agenda for August 9 meeting
7. Evaluate meeting

## **BAKER RIVER COMMITTEE OPERATIONS TOPICS**

### **Juvenile Fish Passage Migration Update**

Arnie walked the group through the “Baker Project Juvenile Fish Trap and Haul Results - Draft” handout. Total juvenile fish passage through Upper Baker so far has passed 144,000 and 7,700 at Lower Baker for a total of 151,000. The migration will continue through the end of July and early August. Tables were also distributed on daily counts and mark-recapture rates from reservoir study groups. Recapture rates at Upper Baker range from 54-58 percent for coho and 32 percent for sockeye and 30 percent for coho at Lower Baker. PSE has been picking up the operations of the Little Park Creek smolt collection trap in recent years. LPC smolt trapping operations will end for the season, June 15<sup>th</sup>. Final season totals will be reported at the next Aquatic Resources Group meeting. Gary reported that age of juvenile sockeye migrants examined from 2005 scale samples indicate a data trend back to younger fish of age 1-3.

	Unmarked Coho	Marked Coho	Unmarked Sockeye	Marked Sockeye	Chinook	Pink	O.mykiss	Native Char	Cut-throat	Other
<b>Upper</b>	32,482	8,100	86,763	15,920	695	0	183	2	11	3
<b>Lower</b>	2,697	1,562	3,211	83	73	0	24	4	9	40
<b>Total</b>	35,179	9,662	89,974	16,003	768	0	207	6	20	43

*Through June 13*

## **Sockeye Beach Fry Production Results / Artificial Incubation**

**Spawning Beach 4-** Sockeye fry production started early/mid February and ran through May. A total of 1.6 million fry were counted out of Beach 4. Fry production operations at Beach 4 concluded May 23<sup>rd</sup> and the beach was drained for annual maintenance. Repairs were made on the curtain between Sections C and D to correct delamination. Additional maintenance will be made next year. The counter at Beach C failed early on and was switched with the counter from Beach A. The counters are all going to be sent back for calibration and repair. The beach has been watered back up for the next season of operation. Kevin reported that the dye test performed on June 11<sup>th</sup>, to check on the dispersion of water in the under gravel pipes throughout the gravel beds, went very well and had excellent dispersion (Kevin has a CD-ROM of the results for anyone interested).

This is the second year in a row that the 1,200 adults loaded into Beach C has yielded only about 315K fry; the group discussed the value of overloading Beach C and possibilities for promoting uniform dispersion of spawning fish.

The group also discussed counter accuracy issues and data quality. We agreed that there is a range of error in the data, which confounds trend interpretation and can impair good decision making. The outstanding question is whether that range is knowable and consistent over time (i.e., can we at least pull trends from the data we have)? Kevin will look at the brood year data for 2003, 2004, & 2005 to check if the % error is consistent.

**Spawning Beach 3-** Fry are not counted as they emigrate from the beach. These are brood from the 500 adult fish that were allowed to spawn in the facility. Consistent pathological advice is to spread the risk around which includes distributing adult fish in this facility, but low-water supply issues prevail at times which are then augmented by pumping water into the facility.

**Artificial incubation program-** Sockeye fry production went well. A total of 1.18 million fry were produced. Of these, 75% (777,000) were released to Baker Lake and 25% (263,000) to Lake Shannon; and 147,000 held back for delayed releases from the rearing program.

## **Sockeye Beach Loading Plan**

Beach 4: 850 will be loaded to all (sections A, B, D) except C, which will get 1,200 for one more year so we can get a third year of trend data.

Beach 3: Given the official drought condition & minimal snow pack, Kevin shared his concern that we may not have enough water to pump Beach 3 during late summer. If there isn't enough water to keep the pump going, we wouldn't sacrifice those fish; if it becomes necessary, we would net them and transfer them to the lake. Given the resource costs to maintaining the beaches during low-water years, is it worthwhile to load Beach 3 with adults in 2005?

After discussion, the group reached consensus to not load fish into Beach 3, and to maximize artificial incubation instead. Kevin & Gary decided to use 225 fish as the additional amount to increase the artificial incubation program (to equal the yield we could have expected from Beach 3). This would raise the artificial incubation program from 1,300 to 1,525 adults.

Brood Year 2005 Sockeye Loading Plan

Beach 4A	850
Beach 4B	850
Beach 4C	1,200
Beach 4D	850
Artificial Incubation	1,525

Gary will follow up with the weekly sockeye distribution plan to meet these loading goals.

*Co-Manager's* preliminary Baker sockeye return forecast is for 17,000. There is discussion among the Fish Co-Managers of a potential sockeye fishery at Baker Lake. This is in addition, to a potential fishery in the river near the mouth of the Baker River at Concrete.

### 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 where the fish have been released and the plans for fish contained at the ponds. He also reviewed the distribution of releases for the spring of this year.

BAKER PROJECT FISH INVENTORY  
Inventory date 6/7/2005

location	Species	brood year	population	fish/lb	planned release date and location	comments
Raceway 1	Sock	2004	59,957	178	All will be ad-clipped. Fall release group in November to Baker, and 5k spring release of freeze brand to Baker	
Raceway 2	coho	2004	64,980	300	All will be ad-clipped. 3- 5k freeze brand groups for mark-recapture studies. Remainder released in spring to Skagit R.	
( fry trough 1, 2,3) Raceway 3						Empty
( fry trough 4,5,6) Raceway 4						Empty
Trout pond	Rainbow	2003	10,234	1.95	4,000 to depression 4/27/05 1,100 to Upper Skagit Tribe 5/9/05 5,050 to depression 5/26/05 300 to Troutfest derby 6/4/05	Final releases scheduled for June 22, June 29, and several charity events in July-early Aug. Trout Pond will be prepared for Sockeye broodstock by mid June.
Circular 1						Empty- Will receive Rainbow trout from Arlington Hatchery in late June.
Circular 2						Empty
Circular 3						Empty
Circular 4						Empty
Circular 5						Empty
Vault						Empty
Incubation shed						Empty

Doug also shared that the Trout-Fest Derby that was conducted in early June for disabled and disadvantaged children was very successful and appreciated by all.

## Adult Trap Protocol Update or Changes

Arnie walked the group through the “Baker Adult Fish Trap Protocol” Handout.

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

<sup>1</sup> All returns to Skagit River released @ Hamilton when possible.

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

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

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

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

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

<sup>7</sup> whack and read, until first Skagit Summer or Fall, then to Marblemount.

There was discussion about early-returning ad-clip/coded-wire tagged Chinook; the committee decided that the co-managers need to make the decision about whether or not to sacrifice these fish as stated in the current protocol. Jon-Paul will facilitate the co-managers discussion and tell PSE their decision. PSE will let the ARG members know. Doug will change the protocol sheet accordingly.

Except for the protocol for ad-clip/coded-wire tagged Chinook (which may change – see above), the trap protocol will continue to be followed as is.

## Daytime Downramping

The project has occasionally been downramping during the daytime. Cary reported that this issue has

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Baker River Project Relicense

FERC Project NO. 2150

Aquatic Resources Group, June 15, 2005

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been addressed (there was some confusion due to a recent change in management) and that communication will continue to be improved.

## **RELICENSE STUDIES UPDATE**

### **A-38 Native Char Investigation**

Phil presented the one-page schematic (Figure 5-1) from the April 2005 Native Char Investigations Report and reviewed with us the discussions that took place at the May 2 technical teamlet meeting on this subject. The team decided to increase the frequency of snorkel surveys in Sulphur Creek, and to conduct night snorkeling at the peak of the run.

Upper Baker River snorkel surveys: According to the study plan, Baker River segment has been divided into four sections. For 2005, they will snorkel reaches 2 and 3. In the future, they will consider expanding sampling into tributaries by partnering with other groups (in 2006 and beyond).

R2 will be electro-fishing two groundwater tributaries in southwest Lake Shannon to survey for juvenile native char, they will try to use dip nets to capture juvenile native char in Sulphur Creek at night.

Temperature: We will continue to monitor temperatures at select tributaries to get two years of *data at a site before removing the recorders*.

Angling: Doug reported that there were 14 *char captures at the Upper Baker downstream fish passage facility* and one previously floy-tagged fish. At Lower Baker, there were four *captures* and one previously tagged; six *char were captured* in the adult trap. We will continue sampling, dividing angling effort this year between Baker Lake and Lake Shannon.

### **A-09 Instream Flows**

Phil talked the group through the progress to date on the Instream Flow report. The draft report *may be* out in August before the next ARG meeting.

## **EARLY IMPLEMENTATION**

### **Fish Passage:**

Nick reviewed with us the schedule for the Floating Surface Collector (FSC), Net Transition Structure (NTS), moorage system, and launch site (graving dock). 30% drawings are done for FSC & NTS. They plan to begin construction of the launch site in mid-October and be operational by November 15.

### **Fish Propagation Facilities**

Arnie reported that there have been a couple site visits by the engineering design contractor, HDR/FishPro at Spawning Beach 4 where the new hatchery will be built. The main thrust now will be to get the production program defined and production analysis, which will get us started designing. PSE will be contacting a teamlet or hatchery sub-group of the ARG to get input on a list of rearing and holding criteria we would propose to use for the hatchery. The goal is to get to 15% design of the hatchery by the end of the year. We have begun investigating permitting requirements.



For the Aquatics articles, we've identified the contractors and consultants who will be working with us. Montgomery-Watson-Harza will continue to support the design development for the Downstream Fish Passage facilities; R2 for upstream passage, including passage connectivity; Washington Group for powerhouse upgrade design; and HDR/FishPro for the hatchery. For the development of the various management plans (including: Flow Implementation, Gravel Management, Large Woody Debris and Reservoir Shoreline Erosion) we will be working with R2. We will begin developing these management plans in early 2006. Shauna Tran is the new project manager at PSE for implementing the Baker License.

### **BRICC Report**

Folks who were in attendance at the June 7 BRICC meeting updated the group. Highlight: Connie will be sending an invitation to all Settlement parties to participate in an information sharing session re: permitting with DOE, Concrete, Skagit and Whatcom Counties. This is to help new-comers to the process get their questions answered and issues/concerns addressed and support efficient progress on Settlement projects.

### **ARG GROUP NORMS**

The group reviewed and discussed the norms. Suggestion: add a norm addressing handouts (sufficient quantity and clearly titled).

### **MEETING EVALUATION**

#### **What Went Well**

- Out early
- Location – short drive from La Connor
- Good Turnout
- Merged meeting (Ad-hoc Baker River Committee and ARG)

#### **What to Do differently**

- Would be nice to have deviled eggs again
- Smoked salmon
- Location – long drive from Olympia
- Handouts – have enough and title / number / color them

### **HANDOUTS**

- Aquatic Resources Group Final Notes, April 20, 2005
- Aquatic Resources Working Group List June 15, 2005
- Draft BRICC – ARG Meeting Norms
- Baker Project Juvenile Fish Trap and Haul Results – Draft
- Brood Year Hand-Out
- BY04 Fry Production, Beach #4
- Baker Sockeye Spawning Beaches Loading Plan (Attachment 6)
- Baker Sockeye Spawning Beach Production 1957-2003 Brood Year
- Baker River Salmon Planting History
- Baker Adult Fish Trap Protocol

- Baker Project Fish Inventory, 6-7-05
- Adult Salmonid Returns to the Baker River Trap 1926-2004
- Baker River Adult Fish Return, Season Totals June 2004 – May 2005
- ARG-Technical Sub-committee on Native Char, Draft May 2, 2005 Meeting Notes
- Baker Relicense Program, Aquatics Articles ARG Consultation Schedule
- Baker River Native Char Investigations – DRAFT April 2005, Figure 5-1

### **Tentative Agenda for August 9, 2005**

**(9:00-3:00 p.m., USFS Building in Mountlake Terrace )**

9:00 – 9:15 Review agenda, notes, actions

9:15 – Noon Operations Topics

- Juvenile Fish Passage Migration Results
- Sockeye Return and Distribution
- Fish Rearing Inventories & Releases
- Adult Trap Protocol Update or Changes

Noon – 12:30 Lunch

12:30 – 1:15 Relicense Studies Update

- A-38 Native Char (field results)
- A-9 Instream Flow (draft report)

1:15 – 2:15 Update on Early Implementation Activities

- Fish Passage Technical WG Report
- Fish Propagation

2:15 – 2:45 BRICC Report

Revisit Meeting Norms for ARG

Review Initial Work Schedule

2:45 – 3:00 Confirm date (Sept. 21) and set agenda for next meeting

Evaluate the meeting