CENWP-OD 10 July 2008

MEMORANDUM FOR THE RECORD

Subject: FINAL Minutes for the 10 July 2008 FPOM meeting.

The meeting was held in the 11th floor Columbia Room at NOAA Fisheries, Portland. In attendance:

Last	First	Agency	Office	Email
Benner	David	FPC	503-230-7564	dbenner@fpc.org
Bettin	Scott	BPA	503-230-4573	swbettin@bpa.gov
Cordie	Bob	USACE	541-298-7406	Robert.p.cordie@usace.army.mil
Fredricks	Gary	NOAA	503-231-6855	Gary.fredricks@noaa.gov
Fryer	Jeff	CRITFC	503-731-1266	FRYJ@critfc.org
Hausmann	Ben	USACE	541-374-4598	Ben.j.hausmann@usace.army.mil
Hevlin	Bill	NOAA	503-230-5415	Bill.hevlin@noaa.gov
Jackson	Aaron	CTUIR		
Lee	Randy	USACE	503-808-4876	Randall.t.lee@usace.army.mil
Lorz	Tom	CRITFC	503-238-3574	lort@critfc.org
Mackey	Tammy	USACE	503-808-4305	Tammy.m.mackey@usace.army.mil
Meyer	Ed	NOAA	503-230-5411	Ed.meyer@noaa.gov
Moody	Greg	USACE	509-527-7124	Gregory.p.moody@usace.army.mil
Richards	Steven	WDFW	509-545-2050	richaspr@dfw.wa.gov
Schwartz	Dennis	USACE	503-808-4779	Dennis.e.schwartz@usace.army.mil
Stansell	Robert	FFU	541-374-8801	Robert.j.stansell@usace.army.mil
Swenson	Larry	NOAA	503-230-5448	Larry.swenson@noaa.gov
Tackley	Sean	FFU	541-374-8801	Sean.c.tackley@usace.army.mil
Whiteaker	John	CRITFC	503-238-3562	

Ben Hausmann and Aaron Jackson called in.

1. Review/Approve Agenda and Minutes.

1.1. Klatte had another meeting to attend and Dykstra was out on paternity leave so Mackey chaired the meeting. June minutes were not available for approval, they will be approved at the August FPOM. Additional items were added to the agenda.

2. Action Items

2.1.[long time ago] Switchgate seals at BON and JDA. **ACTION:** JDA will move forward with the airbladder seals. NOAA worries about fish being able to access areas under the gate. BON will continue moving forward with reducing leakage around and under the gate. ***STATUS:*** *JDA has turned the task over to the small projects team at RDP.*

2.2.[long time ago] BON PH1 Grizzlies, back on the action item list until drains are modified. **ACTION:** Hausmann will investigate options for modifying the grizzly drains in the PH1 draft tubes.

2.3.[May 08] TDA grating replacement. **ACTION:** Cordie will look at the cost of water chemistry testing. ***STATUS:*** *No test results yet. Fredricks asked about the testing protocols. Cordie indicated he was uncomfortable with just one sample so they will do more. More to come in August. Fredricks talked about wanting to create an ad-hoc water quality committee. The group would need to discuss the TDA test results and further actions. It was recommended Klatte chair that committee.*

2.4.[Jul 08] Water Quality ad-hoc committee. **ACTION:** Klatte will convene the meeting to discuss water quality testing protocols and needs.

2.5.[May 08] McNary dewatering screen monitoring. **ACTION:** Swenson will provide some ideas about potential solutions to NWW bios. **ACTION:** Dykstra will set up a meeting for an ad-hoc discussion with engineers and the Project. Dykstra will also make sure Swenson gets electronic

copies of the channel and screen drawings. ***STATUS:*** *Swenson believes there is a potential fix. He still needs to meet with the engineers and hopes to do that soon.*

2.6.[Jul 08] McNary dewatering screen monitoring. **ACTION:** Swenson will put together a memo detailing the recommendation. Once that has been completed, this action item will be removed from the list.

2.7.[May 08] NWW fish release site at BON. **ACTION:** Dykstra will draft up the SOP for draining the flushing water line after each fish release. The flushing will be done by the truck drivers. ***STATUS:*** *Draft SOP will be completed before fish are released but as of yet, it is not completed. Moody indicated there were modifications that need to be completed by 8 August.*

2.8.[Jun 08] B2CC end of season closure date. **ACTION:** Fredricks will get his analysis into a memo and sent to FPOM. ***STATUS:*** *Sent on 9 July. Included in the minutes.*

2.9.[Jun 08] BON FOG lifting beam status. **ACTION:** B. Hausmann will check on the repair status of the FOG lifting beam and forward the schedule to Mackey. ***STATUS:*** *Sent to the District. The original beam isn't worth repairing so a new one is being engineered. No estimated time of completion, but should be before 2009 season. Hausmann will send more information when he receives it.*

2.10. [Jun 08] BON AFF summer sampling. **ACTION:** Lorz will provide a detailed change form explaining what CRITFC is asking for with regards to sampling during elevated water temperatures. ***STATUS:*** *Lorz sent the form on 2 July. Included in the minutes.*

2.11. [Jun 08] BON PH2 VBS/STSs. **ACTION:** Lorz says he will send the FPAC letter regarding the screens and how the issue was handled. ***STATUS:*** *The letter was sent to NWD and Bob Willis. It will be included in the minutes. CRITFC did request a response back from USACE. NOAA didn't sign on to the letter. Fredricks prefers these types of issues be dealt with in FPOM rather than through letters.*

2.12. [Jun 08] BON PH2 VBS task group. **ACTION:** Hausmann will convene the task group to discuss the PH2 VBS cleaning SOP, possible criteria for pulling screens, etc. ***STATUS:*** *First meeting to be held on 14 August, following the FPOM meeting.*

2.13. [Jun 08] JDA PIT tag detection in the SMF bypass flume. **ACTION:** JDA Project will establish criteria for shutting down the facility. This will be presented to the NWP engineers. Klatte will send that information to the appropriate people. ***STATUS:*** *Cordie sent the criteria used to determine the closure date on 18 June. Cordie explained the Project thinks they can drain the SMF flushing water to prevent it from freezing. If it can be done, there is the possibility the flume may remain running until 30 November. This item will remain on the list until Cordie gets a final ok.*

2.14. [Jun 08] LGS back flushing of orifices. Hevlin would like to work out a plan, based on debris criteria, to have the project personnel manually back flush the orifices every hour. **ACTION:** Moody and Hevlin will continue to work on this. ***STATUS:*** *Need a lot more discussion. This item ties in with agenda item #17. FPOM discussed some options of orifice back flushing such as what is used at BON. Conversation veered into the reporting of descaling from NWW, which will be covered under agenda item #4.*

2.15. [Jul 08] LGS back flushing of orifices. **ACTION:** Hevlin will meet with NWW to discuss options. After that meeting, he will present findings and report to FPOM in September.

2.16. [Jun 08] Shad Fishery. **ACTION:** Cordie will provide an update on the shad fishery results at the July FPOM. ***STATUS:*** *No shad fishery this year.*

2.17. [Jul 08] BON spillway exploratory drilling. **ACTION:** Schwartz will follow up on this with Don Erickson.

2.18. [Jul 08] BON spill patterns with Bay 15 closed. **ACTION:** Schwartz and Lee will get a memo discussing the GDACS patterns to FPOM by 15 July.

2.19. [Jul 08] BON spill patterns with Bay 15 closed. **ACTION:** Fredricks will talk with Paul Wagner about getting BON higher on the spill priority list.

2.20. [Jul 08] FPC descaling criteria. **ACTION:** Benner will check on the status of the FPC memo. It will include all the pertinent information requested by FPOM such as descaling criteria and determination; need a central SMP brain, which should be FPC; and reporting criteria.

2.21. [Jul 08] FPC descaling criteria. **ACTION:** Moody and Dykstra will review the reporting requirements in the SMP contract. They will take action to make sure the injuries are accurately reported in the SMP and USACE reports. They will report back at the August FPOM.

2.22. [Jul 08] FPOM coordination actions. **ACTION:** Mackey will develop a list of alternative POC contact info.

2.23. [Jul 08] Jack length. WDFW recommends two criteria for determining jacks, one measurement for Spring chinook and one for Fall chinook. **ACTION:** Fryer will look at jack length and come up with a sensible recommendation.

2.24. [Jul 08] AFF trapping protocols when water temperatures reach 70°F. **ACTION:** Mackey will update the change form. ***STATUS:*** *The corrected change form is included with the minutes. It keeps the sample hours from 0600-1000 and includes a cut-off temperature of 72°F.*

2.25. [Jul 08] AFF trapping protocols when water temperatures reach 70°F. **ACTION:** Lorz will draft a change form proposing the picket lead operation. ***STATUS:*** *Lorz sent the form on 14 July for discussion on 16 July.*

2.26. [Jul 08] AFF trapping protocols when water temperatures reach 70°F. **ACTION:** Mackey would organize a conference call to discuss the change form on 16 July. ***STATUS:*** *The conference call was held on 16 July. Those meeting notes are included with these FPOM meeting minutes.*

2.27. [Jul 08] AFF trapping protocols when water temperatures reach 70°F. **ACTION:** CRITFC will look at PIT tag data for travel time from the AFF to BO3 and present it to FPOM.

2.28. [Jul 08] Lamprey trapping at JDA. **ACTION:** Mackey will coordinate the development of protocols. ***STATUS:*** *CTUIR developed a half-page list of protocols to be used for trapping and sent those on 15 July. They were discussed at the 16 July meeting.*

2.29. [Jul 08] JDA MU1 annual maintenance. **ACTION:** Cordie will continue to work on this one. He will need to look at the 2004-2007 passage numbers in October by JDA. Cordie will prepare a memo and send that to FPOM.

3. Updates.

3.1. BON SLED removal. All SLEDs were removed by 30 June.

3.2. BON spillway exploratory drilling. No updates at this time. **ACTION:** Schwartz will follow up on this with Don Erickson.

3.3. BON Main Dam bay 15. The Project is currently about a week ahead of schedule. An inspection of the concrete showed no damage. The gate will be raised then lowered for another inspection, just to be sure.

3.4. BON spill patterns. Fredricks expressed some concerns about the spill patterns. He saw some spill levels below 100K gas cap. He believes those levels are too low for what is adequate at BON for sub-yearling passage. He reviewed the last three years and found that the first few days of July routinely have this operation. He would like to know what is going on to cause that and what is different this year to cause it to be more pronounced. He would like to look at the spill pattern used at night and how GDACS is adjusting for the bays that are currently dogged off.

3.4.1. Schwartz responded that he looked at what the dogged bays would normally be at with an 85K pattern and found they would be close to 3.0', so the gates are set at two dogs (roughly 2.9'). He believes something else is elevating the gas levels, maybe tailwater and marginal deflector performance. R. Lee is looking at the patterns developed by GDACS versus the normal pattern.

3.4.2. It is suspected this is a tailwater caused issue, which is why Fredricks has discussed adjustable flow deflectors. Current tailwater is about seven feet higher than normally seen this time of year. May require another trip to ERDC to look at patterns that adjust to tailwater. This has been discussed before but may need to revisit it because peak migration is right now and we need the best conditions possible, which we do not have.

3.4.3. The spillway is currently the best route of passage right now. The B2CC is great but it doesn't get as many fish.

3.4.4. ACTION: Schwartz and Lee will get a memo discussing the GDACS patterns to FPOM by 15 July. It will include: dogged and closed gates; analysis of five days of data looking at current pattern and how it is affecting gas levels; reviewing 2005-2007 data to tease out temperature, tailwater, or sensor location driven gas levels and take that information to ERDC to develop a pattern. It is anticipated this will take until 14 or 15 July.

3.4.5. Bettin asked where BON is on the spill priority list and if it isn't very high, maybe it should be bumped up. **ACTION:** Fredricks will talk with Paul Wagner about getting BON higher on the spill priority list.

3.5. NWP ROV inspections. BON-8/12 , TDA- 8/5, JDA- 8/6

3.6. NWW debris spill. A couple of spills occurred at LGS and LMN. They were successful.

4. **FPC Descaling Criteria.** FPC would like to respond with a memo.

4.1. The first issue is the uniformity of reporting descaling. Fredricks asked if everyone was using FTOT criteria. The answer is no, there is no standardized descaling method at the Snake river and MCN projects. The lower river is pretty consistent and uniform in how the smolt monitoring program (SMP) identifies and reports descaling. Lorz explained the sequence of events that has now led to the request to standardize procedures. This year the reporting will remain the same and starting next year, everything will be standardized. Fredricks asked what the standardized methods will be. Lorz said the criteria is good but the reporting needs to be standardized.

4.2. The second issue is the reporting. Descaling and injuries are reported differently by FPC, SMP and USACE at the Snake river and MCN projects. Hevlin pointed out that a 20% injury rate was reported by FPC but no mention of it showed up in the SMP and USACE reports. Further discussion clarified that, when the issue of combining descaling and injury rates was discovered, the requested action was to continue with the same reporting system until next season.

4.3. ACTION: Benner will check on the status of the FPC memo. It will include all the pertinent information requested by FPOM such as descaling criteria and determination; need a central SMP brain, which should be FPC; and reporting criteria.

4.4. ACTION: Moody and Dykstra will review the reporting requirements in the SMP contract. They will take action to make sure the injuries are accurately reported in the SMP and USACE reports. They will report back at the August FPOM.

5. **FPOM Coordination Process.** The question was asked about what happens if no one responds to a coordination request. FPOM said phone calls should be made on any emergency or short timeframe action and most agencies have an alternative POC who could be contacted. Bettin suggested using the voting feature in Outlook. **ACTION:** Mackey will develop a list of alternative POC contact info.

6. **BON gatewell testing.** *The recorder battery died at this issue so notes are sparse.*

6.1. Schwartz wanted to make sure the BON u14 gatewell testing could continue even if water temps reached the 70°F cutoff before 19 July. Fredricks commented that the point of this research is to push the edges to see how fish respond. **FPOM is ok with continuing gatewell testing after**

water temperatures reach 70°F as long as the researchers feel comfortable handling the fish.

7. **BON PH1 gatewell dipping basket.** The Project no longer has a gatewell dipping basket that fits the PH1 gatewells. Since this will be the last year the fish screens will be installed, **FPOM said it is ok to pull VBSs and STSs 24-48 hours prior to a unit dewatering. The unit should be operating to flush fish through.**

8. **BON AFF task group.** Discuss the future of the AFF and develop a task group to further explore the options. Members include Meyer, Clugston, Fredricks, Mackey, Klatte, Lorz.

9. **BON AFF sampling at 70°F and above.** *The battery was replaced in the recorder.*
   - **9.1.** Lorz led the discussion asking to change Appendix G 4.2. *Sampling will be permitted 1-day per week from 0600- 1000 when water temperatures exceed 70°F to allow for mandatory steelhead sampling* to Appendix G 4.2 *Sampling may take place up to 4 days per week. Trapping operations can take place between 0600 and 1200 hours, for up to 4hours per day or until the designated number of desired fish are obtained, whichever occurs first. During the summer months, the period from 0600 to1000 hours is preferred.* He commented that this is the same criteria at LWG.
   - **9.2.** Discussion about the hours resulted in the final result being four days a week from 0600-1000. **ACTION:** Mackey will update the change form.
   - **9.3.** Schwartz brought up the number of leads allowed down during this time. It was clarified that only two leads would be allowed down, as current protocols specify.
   - **9.4.** CRITFC said they may need more leads down to get their target steelhead sample sizes. A bit more discussion occurred about the potential for putting all four down for one hour. **ACTION:** It was determined that Lorz would put together a change form proposing the picket lead operation. Meyer suggested the AFF task group discuss the methods of handling as well as the number of fish that should be handled. Fredricks commented that USACE says they don't need the facility. If that is true, then the facility should be shut down after all the CRFM research is over.
   - **9.5.** Schwartz asked if CRITFC had any information on the effects of clove oil as temperatures increase. Whiteaker said the crews adjust the amount throughout the day, based on how the fish are responding. They aren't finding it as closely correlated with temperatures but do find that more clove oil is needed as temperatures increase. Recover time is very quick.
   - **9.6.** Schwartz asked if there is data to look at how quickly handled fish are moving up the ladder. He suggested the PIT tag data could be looked. From time of release of the fish to the time it reaches the BO4 detector would be interesting information. **ACTION:** CRITFC will look at that data and present it to FPOM.
   - **9.7.** Despite all attempts to move to the next item, Lorz wanted to know what FPOM might approve as far as picket lead operation. FPOM discussed options of closing all four leads for an hour at 0600 or at 0800. There was talk of starting with three leads and progressing to four leads. **ACTION:** Mackey would organize a conference call to discuss the change form on 16 July. Hausmann requested a discussion of realistic sample sizes. This item will be included in the 16 July meeting.

10. **CTUIR lamprey trapping.** A. Jackson talked about the lamprey trapping proposal (included with the agenda) for JDA. This proposal came out of the 26 June lamprey allocation meeting as a way to get more fish for the tribes.
    - **10.1.** CTUIR would like 500 lamprey total. CTUIR has received about 70 for broodstock right now. They need an additional 187 lamprey to meet the 500 fish goal. This would be a short-term

solution, maybe just a feasibility study to see if it could be done. Richards asked if the trap could go between the picket leads. Jackson wasn't sure and would like to talk with Cordie to talk about different areas that might be appropriate. Cordie asked about scent in the water. Jackson said Chris Peery indicated his crew could assist with checking the traps. Jackson said he would provide all counts to USACE as well. Richards wanted to know if the traps were square or round. He recommended square traps might be worth trying as well. Jackson said these traps are round and have been used successfully in Cedar Creek. Lorz asked about attachment points.

10.2. Fredricks commented he wanted the traps kept clean to keep foreign scents out of the fish ladder. Fredricks asked Jackson how he would do that. Jackson said he wasn't sure how and that these traps have been used on other rivers. He suspects, with warmer water temperatures, they would algae up pretty quickly. Lorz suggested the same protocols used at the AFF be used at JDA. There aren't any written protocols for deploying lamprey traps at the AFF. **FPOM says CTUIR needs to develop protocols with NOAA Fisheries. ACTION:** Mackey will coordinate the development of protocols. Lorz suggested this could be included in the agenda for the 16 July conference call.

10.3. FPOM is ok with trapping at JDA, as an experiment, for now. Jackson would like to start deploying the trap as soon as possible and continue through mid-August. Once protocols are drafted and reviewed, could FPOM give approval by next week? There was more discussion about concerns with trapping in the main section of the fishway. Mackey said that the 26 June meeting attendees were very clear that the trap must not interfere with salmon passage. At this time there is no interest in putting obstructions in the main section of the fishway.

11. TDA Fish Unit 2 outage on 14 July. FPOM wanted an explanation for why the work has to happen now, why it can't happen at night and why there wasn't more time for coordination.

11.1. Cordie explained what the outage is for. It is to allow for the replacement of the lifting beam so the hydraulic headgates can be removed. The engineers need to design a lifting beam for the headgate. Shutting down the fish unit was unanticipated by the engineers.

11.2. Fredricks asked why the outage wasn't anticipated earlier. He recognizes there isn't a big impact, but the number of last minute, fish impacting requests have increased and this one needs more explanation. Why wasn't it planned months in advance? Why is it a safety issue to work at night? He would like to see more consideration for night work during the fish passage season. Cordie said the Project is willing to do the work at night if they must, but it would be better to do it during the day when there is plenty of light to see.

11.3. Fredricks asked what the impacts to fish would be. Cordie responded that F1 would be ramped up, the east entrance is at 13' so they could close that a bit and there is the possibility they will remain very close to criteria. The outage would be only two hours.

11.4. FPOM says get the work done sometime after noon.

11.5. *Update on the outage- it went very smoothly. F2 was down for about an hour, F1 was increased and the work was completed before Cordie had time to go out and check the entrances.*

12. JDA South pump outage on 14 August. JDA needs to perform maintenance on a discharge pump. Divers are needed to cap the discharge pipe so Project maintenance can perform their maintenance activities on the pump. To cap the discharge pipe, the south fish pumps need to be shutdown so divers can safely access the end of the pipe. Capping the discharge pipe will have minimal impact on fishway operation. The Project plans to piggyback on the mid-season ROV inspection date (currently 6 August), when the fish pumps are already down. The impacts will occur on 14 August, when divers return to remove the cap. The fish pumps will need to be out of service for about two hours so divers can access the pipe and remove the cap. The fishway will be without attraction flow

for about two to three hours on 14 August. Based on discussions at the 12 June FPOM (for a TDA AWS outage) it seems a late morning outage would be preferable. This would reduce the impact to those fish entering the ladder in the early morning hours. Looking at the last four years, fish counts have been under 1000 fish, except in 2007, on and around the 14th of August so it is anticipated the numbers of fish impacted would be minimal. The outage period will be minimized to the extent possible. The Project inquired about night diving but the Dive Safety Office has indicated a preference to not dive at night for safety reasons.

12.1. FPOM says this is okay to shut the two fish turbine pumps down to remove the cap anytime after 1100. Cordie thought maybe they could just divert the flow, but after further exchange with the Dive Safety Office, that is not an option.

13. JDA MU 1 scheduled maintenance. Currently scheduled for October- November.

13.1. FPOM asked why this ended up scheduled for fish passage season. Fredricks would like to see it delayed a month, or at least as late as possible. **ACTION:** Cordie will continue to work on this one. He will need to look at the 2004-2007 passage numbers in October by JDA. Cordie will prepare a memo and send that to FPOM.

13.2. Cordie talked about spring/summer 2006 when Line 1 (units 1-4) was out and there were no noticeable impacts. He also mentioned when units 1-5 were out of service in the fall and they did see an impact.

14. JDA PIT tag sampling. This was covered under the action item 2.13.

15. JDA North ladder update. This is a FPOM heads up that there may be a request for a five month outage of the ladder. The request will go through FFDRWG. The concern will be the time when the north ladder outage overlaps with the south ladder outage for winter maintenance. There was discussion that as long as there was no spill, then the outage isn't as much of a concern.

16. IHR unit priority change. Due to recent increases in dissolved gasses in transformer 6 after its repair, Ice Harbor would like to modify unit priority. Having U6 last on, first off (order 3,1,4,5,2, and 6). This would greatly reduce the amount of load time on transformer and thus giving more time to come up with a permanent fix.

16.1. This is completed.

17. LGS debris issues. Need to discuss actions to be included in the 2009 FPP which will ensure that plugged orifices are quickly identified and opened.

17.1. This was discussed under action item 2.15

18. Task Group updates

18.1. AFF modifications (***Chair- ?*** *Clugston, Fredricks, Klatte, Lorz, Mackey, Meyer*)

18.2. Fishway velocity (***Chair-Cordie****, Fredricks, Lorz, Meyer, Mackey*) Meeting after the August FPOM meeting. This will be to discuss the proposed FPP change form.

18.3. Lamprey (***Chair-Cordie****, Clugston, Dykstra, Lorz, Mackey, Meyer, Moody, Moser, Peery, Rerecich, Zyndol*) Lamprey allocation meeting on 26 June.

18.4. PH2 VBSs (***Chair- Hausmann,*** *Benner, Fredricks, Klatte, Lorz, Mackey, Meyer, Wills*) Meeting after the Fishway velocity meeting (after the August FPOM).

18.5. Pinnipeds (***Chair-Stansell****, Bettin, Benner, Brown, Fredricks, Hausmann, Kruger, Stephenson, Richards, Wills*) Meeting held on 7 July. Stansell gave a report on the meeting. Smith-Root did some testing in a pool and would like to move to something bigger, like a fishway. Talked about some other ideas such as shock collars, microwave guns, sonic pulses, marine mammal trainers, etc. Need to get official notes next time.

18.6. TIES (***Chair-Klatte****, Bettin, Benner, Fredricks, Kruger, Mackey, Schwartz, Wills*) No updates on the TIE crane. Meeting will be scheduled after spill season.

19. Water forecast. www.nwrfc.noaa.gov/water_supply/ws_fcst.cgi Benner provided an update from memory. The RCC handout is included in the minutes.

20. FPP proposed changes.

20.1. BON sturgeon language. (incorporates changes from May 2008 FPOM)
20.2. BON 2.4.2.2.n.1 relocation.
20.3. TDA and JDA velocity measurement language.

21. FPP approved/rejected changes from March 2008- present.

21.1. LGS spill pattern. **Approved** at the April FPOM.
21.2. LMN spill pattern. **Approved** at the April FPOM**.**
21.3. MCN unit priority. **Approved** at the April FPOM.
21.4. MCN spill pattern. **Approved** at the April FPOM.
21.5. JDA SMF PIT tag shutdown. **Approved** at the April FPOM.
21.6. TDA ITS closure. **Approved** at the April FPOM
21.7. BON 50K dates. **Approved** at the April FPOM.
21.8. JDA turbine unit 5. **Approved w/changes** at the May FPOM.
21.9. JDA SMF PIT tag shutdown date. **Approved** at the May FPOM.
21.10. Voluntary v involuntary spill definitions. RCC recommended against including these definitions in the FPP at the June FPOM**.**
21.11. ICH 1% tables. **Approved** at the June FPOM.
21.12. TDA spill pattern change. **Approved** at the June FPOM**.**
21.13. Appendix G- BON protocols section 4.2. **Approved w/ changes** at the July FPOM**.**
21.14. Appendix G-BON picket lead operations at high temps. **Rejected** at the meeting on 16 July.

22. Other

22.1. Jack length. This discussion occurred while waiting for a new recorder battery. S. Richards asked about the 22" jack measurement. He said the 22" line is becoming an Achilles heel for fish counters. Fredricks asked what would be better. The result was two criteria for determining jacks, one measurement for Spring chinook and one for Fall chinook. Fredricks talked with Fryer about the implications of changing jack length and who uses the data. One inch would make a difference for Spring chinook. **ACTION:** Fryer will look at jack length and come up with a recommendation for Spring chinook.

22.2. LWD requests from NGOs. Mackey received a call from the Lower Columbia Fisheries Enhancement Group on 9 July. They would like to use any LWD collected at the Projects for use in 16 logjams on Hamilton Creek. **FPOM says if non-profits want to use the wood for restoration, then go ahead. Firewood is not OK.**

22.3. BON B2CC repairs. Lee talked about the October 2007 inspection. The inspectors found patches had pulled off and took additional material with them. There was no time or money to make repairs in 2007 so they want to get in the B2CC in 2008 to inspect and make necessary repairs. He will talk with J. Kranda to determine where the funding will come from. FPOM asked if we were still under the original contract, if so, it should be under CRFM. No money in O&M. No estimate on cost yet. It is believed the repairs are needed because the patches may have been applied in less than favorable conditions. Lee has a memo from November detailing the damages and the repairs needed.

22.4. BON Cascades Island sockeye. There are sockeye upstream of the picket leads in both WS and CI fishways. This happened in WS in 2007. No known openings in the pickets or side screens.

22.4.1. For CI, the Project can shutdown the upper ladder and chase the fish out or open the exit. **FPOM says open the exit, but not the pickets, and let the fish move out on their own.** There isn't much concern about sockeye falling back over the spillway at this time. Two of the 20-30 sockeye have died so there is an urgent need to get them out of the area.

22.4.2. The WS is more problematic. There is no outlet to the FV6-9 channel. There are only about a handful of sockeye trapped. FPOM discussed many options for getting they fish out. They suggested netting, electro-shocking, and seal bomb/firecracker shells. Stansell suggested doing any salvage at night or opening a picket lead so the fish have a route out. More ideas were thrown around but none were seen as being feasible. Fredricks said he would look at the fishway on 11 July.

22.4.3. *Update- the CI exit was opened on 11 July, fish started to move out.*

22.5. JDA Scaffold/tribal platforms. The platform is set up 200' downstream of the south entrance. Everyone has been notified but no action has been taken. It is within the BRZ and is actively fished. OSP has been called but the fishermen are gone by the time OSP shows up. The question was whether or not there is a regulation restricting platforms within 400' of the dam. No resolution.

22.6. LMN orifice gallery lights. Moody explained that LMN needs to replace the old incandescent lights. He would like to know if there are standards for the type of lights, he would like to go to LED. Moody said he replaced the lights at Little Goose with metal halide lights but those are expensive and the LMN lights need replaced now.

22.6.1. FPOM talked about the candlepower needed. Schwartz will have results from the lights on/off study later this year.

22.6.2. The bulbs do not have the regular light bulb base so they are hard to find. It was suggested Moody talk with some of the other dams to see if anyone has any extra. Richards said he would be out there on 15 July so he will take a look at the lights. Regular flood lights might work but what power? Fredricks would take a look at the BON lights while doing the inspection on 11 July.

23. Next Meeting

23.1. 14 August at BON Auditorium. Will be followed by the Velocity and VBS task group meetings.

24. Finalized results from this meeting.

24.1. FPOM is ok with continuing U14 gatewell testing after water temperatures reach 70°F as long as the researchers feel comfortable handling the fish.

24.2. FPOM said it is ok for BON to pull VBSs and STSs 24-48 hours prior to a unit dewatering. The unit should be operating to flush fish through.

24.3. FPOM is ok with lamprey trapping at JDA, as an experiment, for now. They would also like to see written protocols for minimizing foreign scents in the fishway.

24.4. FPOM says TDA can take F2 out of service some time after noon on 14 July.

24.5. FPOM says this is okay for JDA to shut the two fish turbine pumps down to remove the discharge pipe cap anytime after 1100.

24.6. FPOM says if LWD collected at the Projects by non-profits will be used for restoration, then go ahead. Firewood is not OK.

24.7. FPOM says open the Cascades Island fishway exit, but not the pickets, and let the sockeye move out on their own.

25. The following documents were provided or discussed at the FPOM meeting:

25.1. *Agenda, Fish Passage O&M Coordination Team*. Provided by T. Mackey.

25.2. *B2CC memo from Gary Fredricks.* Included in the minutes.

25.3. *Managing Bonneville Dam Screen System Debris from the JTS.* Included in the minutes.

25.4. *RCC forecast*. Included in the minutes.

25.5. *FPP change forms*. Included in the agenda.

25.6. *FPOM Calendar*. Included in the agenda.

25.7. *16 July AFF and JDA lamprey conference call minutes.* Included in the minutes.

July 8, 2008

MEMO FOR: Fish Passage Operations and Maintenance Team

FROM: Gary Fredricks

SUBJECT: Late Season Bonneville Corner Collector Operation

At the May 2008, FPOM meeting I volunteered to take a look at the juvenile fish impacts of ending Bonneville Dam corner collector operation on August 29 or September 2. The Fish Passage Center was asked to help with this analysis by providing data regarding run abundance and timing.

On June 11, FPC (Jerry McCann) provided subyearling chinook abundance and run distribution timing for Bonneville Dam during the period in question. The hatchery release driven cumulative smolt passage index data for the 2002 -07 passage seasons indicated the subyearling run is normally within the last one percent for the dates in question. A look at the John Day Dam passage timing of tagged Snake and Yakima river wild fall chinook and McNary Dam passage timing of tagged Hanford Reach fall Chinook for the ~1995-04 period also indicated normally low passage abundance for these dates. However, the FPC did caution that while these late season passage estimates are low, the tag numbers represent many more untagged fish and the adult returns for late migrants has been higher than for juveniles migrating earlier in the season.

Methods:

In this analysis, I used the Simpas model updated with the most relevant subyearling Chinook Bonneville survival and passage data (2005 RT survival study) to evaluate differences in dam survival for several alternative operating scenarios.

To estimate the "what if" condition of corner collector survival rates without spill I had to rely on "professional judgment" since we don't have survival estimates with the spillway off. Observations from the Bonneville general hydraulic model and the prototype indicate that a substantial amount of corner collector flow (~40%) eddies into the slackwater spillway tailrace when the spillway is off. We have observed significant late season predation in slack water areas (the direct survival studies at The Dalles Dam a few years ago comes to mind, so it seems reasonable that 10% of the corner collector fish passing into the tailrace eddy could be consumed by predators. If this were true, the corner collector survival would drop by 4% (10% of 40%), decreasing the corner collector survival from 100% to 96%. I also doubled the survival drop to 8% to look at a more extreme effect.

The Simpas model parameters were:

River Flow = 150 kcfs
Spill Flow = 85 kcfs
Spillway Survival = 91.1%
Corner Collector Survival = 100% (with spill)
B2 Bypass Survival = 98.4%
Corner Collector Efficiency (of B2 passage only) = 46.4%

The operating scenarios were:

Run 1 - Spill on, corner collector on

Run 2 - Spill on, corner collector off
Run 3 – Spill off, corner collector off
Run 4 – Spill off, corner collector on with 4% lower survival
Run 5 – Spill off, corner collector on with 8% lower survival.

Results:

A comparison between runs 1 and 2 represents the effect of the decision to shut off the corner collector on August 29. The model indicates that this decision would result in a 1.3% reduction in dam survival.

A comparison between runs 3 and 4 represents the effect of the decision to leave the corner collector on without spill until September 2, assuming a 4% reduction in corner collector survival. The model indicated a 1.8% improvement in dam survival if the corner collector was left on.

A comparison between runs 3 and 5 represented the effect of the same decision but with an even greater (8%) reduction in corner collector survival. The model indicated that this was about the break even point where project survival was about the same with or without the corner collector running. In other words, leaving the corner collector on with survival reduction of greater than 8% would cause a reduction in project survival.

Summary:

The interpretation of this model exercise is pretty straightforward. Closing the corner collector in August while spill was still on appears to result in a reduction in dam survival. Leaving the collector in operation after spill was turned off in September appears to result in an increase in dam survival **as long as corner collector survival did not drop more than about 8%**. For an 8% drop to occur, predators would have to consume about 20% of the fish entering the tailrace eddy, a number that is possible but probably not likely, at least during the short (two day) period of time this condition would exist.

It is important to remember that this analysis is really little more than a guess and what it really supports is the need to evaluate post-spill corner collector survival.

G:\STAFF\DOCUMENT\2008 Documents\JTS\97-08.doc

State, Federal and Tribal Fishery Agencies Joint Technical Staff Memo

Columbia River Inter-Tribal Fish Commission
Idaho Department of Fish and Game
Oregon Department of Fish and Wildlife
Washington Department of Fish and Wildlife

TO: Rock Peters, Northwestern Division, Corps of Engineers
Bob Willis, Portland District, Corps of Engineers

FROM: Thomas K. Lorz, Vice Chairperson
Fish Passage Advisory Committee

SUBJECT: Managing Bonneville Dam Screen System Debris
DATE: June 20, 2008

The salmon managers have concerns regarding current debris management at Corps' fishway facilities, especially at Bonneville Dam. These concerns focus on the present and future operation of the Bonneville Project with respect to meeting appropriate fish passage criteria and protocols. We have written this letter to initiate the process of improving debris management and minimize its impacts on the juvenile bypass system (JBS). The ultimate goal is to be able to operate the bypass system to meet criteria regardless of river flow and debris loads.

With the completion of "JBS guidance improvement" at Powerhouse II, problems have arisen associated with debris and its impacts on maintaining screen system criteria. In past years, under high flow and debris load conditions, the screens were not impacted to the extent witnessed this year by the debris load. This year, high fish descaling and other impacts to juvenile salmon have been a constant concern for much of this spring migration period.

Both the Bonneville II corner collector and the behavior guidance system in place aid in reducing JBS debris. However, the combination of adding the turning (flow) vane and gap closure devices as part of "JBS guidance improvement" to improve the guidance of juvenile salmon away from turbine units has likely lead to more flow and consequently debris being introduced into the gatewell.

While the Bonneville Dam personnel have been diligent in their efforts to keep the systems running, they have been constrained by the shortage of personnel and equipment to properly maintain system operation. The current BiOp modeling depends on the bypass system to insure that project survival targets are met. The modeling assumes that survival targets can be met under all river conditions.

We believe that the issues listed below are major contributors of the existing problems. We outline these issues below and offer possible actions for improvements in an effort to meet the goal of operating the JBS and associated facilities to meet fish passage criteria, regardless of river conditions. We look forward to working with the Corps to resolve these problems as quickly as possible.

Specific Problems

1) TIE Crane – The crane was identified as an important piece of equipment needed for operations at Powerhouse II. Two years ago the salmon managers recommended that repairs be completed as soon as possible. Due to a perceived lack of need for the TIE crane in the future, as well as funding issues for the agencies responsible for the repair of the TIE crane, repairs were not immediately started and the crane was not available for this season. As recently witnessed, without the TIE crane, VBS cleaning takes much longer and is less effective.

2) Intakes for auxiliary water supplies for the adult system have also been plagued by high debris loading, requiring them to be cleaned more frequently as well. With only one crane and limited crews available for cleaning both the Washington shore adult turbine intakes and vertical barrier screens (VBS), the time that can be spent cleaning the VBS is limited. It is troubling that several fishery agencies, notably NOAA and CRITFC, have continually requested automation of debris cleaning for those systems to reduce the need for a crane and a rigging crew. The Columbia River Fish Mitigation Program (CRFM) allocated funds to purchase a new system for the Washington Shore adult system. The system was purchased years ago but has not been installed. Repeated inquires as to the timeline when it would be installed and operating have been left unanswered and no adequate answer for why the system has not been installed has been provided.

3) VBS sensors were reading low and had to be recalibrated, but additional errors in calibration continued requiring the COE to check VBS differential manually.

4) We commend the Bonneville Dam crew's diligence in working during the Friday through Monday shift to help clean the debris from the system, but with limited numbers of personnel available on the weekends, and with only one available crane, it is a nearly impossible to maintain the system.

5) One option that was not fully investigated was reducing the turbine loading to reduce the debris load into the gatewell and help to make the gatewell environment less turbulent and reduce any hotspots that may be present on the VBS screens.

6) Another option that was not fully considered or implemented prior to removal of the STS's was to conduct more aggressive VBS screen cleaning. With the TIE crane inoperable, the VBS's could not be removed and needed to be cleaned in place with the majority of the debris returned to the gatewell.

Recommendations:
We offer the following initial recommendations for ideas and concepts to aid in the operation of the Bonneville JBS for all river conditions. Some of these may be applicable to other dam bypass systems. The region has prioritized a significant portion of program limited funds (i.e. $65 million for the outfall relocation and JBS improvement and an additional $17 million for "guidance improvement") for juvenile screen system passage facilities at Bonneville Dam. There is a great need to insure that these system investments function optimally for all river conditions if the 2008 FCRPS BiOp survival goals are to be met in a timely fashion. We recommend that these recommendations provide the focus for FPOM deliberations.

1) Expedite repairs for the TIE crane to insure that it is operational for the next year's outmigration.

2) Install the fish unit screen cleaners that have been purchased and begin identifying and installing automated screen cleaner systems on critical and problematic intakes and systems.

3) Routinely check the calibration of the VBS differential sensors.

4) Have a flex crew, or some additional personnel available to cover the Friday through Sunday time frame when additional personnel are needed during the high debris events or other emergencies. This may mean establishing a roving crew that can be utilized by several projects throughout the year or have additional crews ready for short periods of time when needed. There might be some opportunity to get additional personnel from other projects to cover as needed. These projects operate 7 days a week and there should be personnel available to maintain the project for that entire time.

5) Fully evaluate the benefits of reducing the turbine loading under high debris loading situations.

6) Fully evaluate the gatewell environment and determine the effects of the "guidance improvements" on overall fish condition and survival across the full range of powerhouse operations.

7) The decision to install screens should rest with the project personnel since they are able to monitor the situation better than others, but fish managers need to be able to review what criteria are being used to determine when the screens are reinstalled. Given the debris loads and the conditions now observed, some meaningful metric should be developed to determine when the screens can be redeployed this year. In future years the criteria may need to be revised since we should be able to deal more effectively with debris making it possible to redeploy the screens sooner.
8) Identify critical pieces of infrastructure that are needed to operate the projects and insure that they can be repaired or replaced in a timely manner so that issues such as the TIE crane do not impact the overall operation of a project.

9) Start investigating options that allow for controlling the flow into the gatewell independent of the turbine operations, or look at a permanent change to configurations of the "guidance improvements" that would allow for the screen system to be operated in a way that reduces flow and debris (e.g. removing the gap closure, swapping out the turning vane with something else, a flapper valve on the VBS to reduce flow in the gatewell, etc.).

10) The COE had suggested a more aggressive cleaning procedure that would not have installed a secondary VBS behind the primary VBS being cleaned. This would allow juveniles in the gatewell to be flushed into the turbine units. However, without the secondary VBS in place, debris would have been free to pass out of the gatewell and be flushed out through the turbine. We were not able to adequately test this technique to determine if it would have aided in keeping the system operating. A potential outline of a cleaning procedure was outlined in SOR#2008-04. This process should be fully evaluated.

PSC Chinook Technical Committee

TO: Principal Investigators and agency representatives involved with Bonneville Sampling
FROM: Dell Simmons and John Carlile, USCTC co-chairs
DATE: June 30th, 2008.
SUBJECT: Adult Chinook sampling at Bonneville Dam

Over the last nine years, the United States section of the Pacific Salmon Commission has funded a number of research and monitoring projects related to abundance based management of Chinook under the Pacific Salmon Treaty Agreement with Canada. Some of these projects have been and are related to collecting vital biological information on Chinook returns to the Columbia river.

PIT tagging of returning Chinook at Bonneville dam is used to obtain age and abundance information by stock that is critical to successful harvest management. However, it our understanding that information critical to Chinook salmon management in the US-Canada arena is not being collected due to perhaps overly strict sampling criteria being applied at Bonneville dam.

Of particular concern are maximum fish density standards that make it difficult to obtain desired sample rates of Chinook. Adequate sampling rates are critical as the precision of stock abundance estimates and age structure is directly related to sample size. Of course, we realize that sampling in conditions that are detrimental to salmon survival should be limited. However, we think exceptions to the normal criteria should be considered on a case by case basis to help attain adequate sample sizes. We hope that issues such as fish densities of healthy stocks of non-salmonid species (e.g. shad) would not impede sampling of returning summer Chinook. We hope that the relevant parties will allow exemptions to the normal sampling protocols such that a sample rate on summer Chinook of at least 1% of the return across Bonneville dam can be attained.

The data collected are vital for Chinook fishery management in the Columbia and for the estimation of Chinook ocean abundance and target catches in Alaska, British Columbia and the waters of Oregon and Washington. We believe that the data collection at Bonneville dam will be done in an efficient manner with the least possible stress to the sampled fish, and appreciate any assistance you can provide.

CTUIR Proposal for trapping adult Pacific lamprey at John Day Dam fishways

As discussed in the "Tribal Pacific Lamprey Restoration Plan for the Columbia River Basin, CRITFC, 2008" the tribes believe that the most urgent problem lamprey face is surviving upstream and downstream passage.

According to CBFWA (2008), available indices indicate severely declining lamprey numbers and precarious status. This is especially true for the interior Columbia River Basin, such as the Snake River Basin in Idaho and the Umatilla and Walla Walla rivers. Information on adult Pacific lamprey passage efficiencies past main stem dams indicates successful passage rates through the hydro system are low and that passage success is poorer for smaller lamprey. For example, Cochnaer and Clarie (2002) found only 541 ammocoetes in sampling 70 sites in five major tributaries of the Lower Snake River.

Umatilla Tribes Translocation Program

In 1995, a status report was completed for Pacific lamprey by the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) as directed by the Northwest Power and Conservation Council (NWPCC). The status report identified measures that needed immediate implementation for reintroduction of lamprey along with recommendations for research and data gathering.

In 1998, a juvenile electrofishing survey in NE Oregon and SE Washington was conducted to document current abundance and distribution in the CTUIR ceded lands. The Umatilla, Walla Walla, Tucannon and Grande Ronde rivers had negligible lamprey presence suggesting extremely low or extirpated lamprey populations for those basins. The John Day River had the best lamprey production of NE Oregon/SE Washington rivers sampled, with juvenile lamprey documented throughout the basin.

In 1999, a restoration plan for Pacific lamprey in the Umatilla River was developed by CTUIR and peer-reviewed as directed by the NPCC. The plan proposed to reintroduce lamprey into the Umatilla River where they were once an integral part of the basin. This plan called for: 1) locating an appropriate donor stock for translocation, 2) identifying suitable and sustainable habitat within the basin for spawning and rearing, 3) outplanting up to 500 adult lampreys annually, and 4) long-term monitoring of spawning success, juvenile growth, juvenile density increases, juvenile outmigration, and adult returns. In 2000, CTUIR began implementing the restoration plan. The Umatilla River was chosen primarily for reintroduction because it once supported an abundant population of lamprey and a traditional lamprey fishery, and donor stocks where geographically close for translocation. In addition, numerous habitat improvements had been completed for salmonids.

Tasks to implement the Umatilla translocation plan include:

- Coordinating with US Army Corps of Engineers main stem dam fishway dewatering activities for the salvage and collection of adult lamprey
- Establishing adult collection facilities at select main stem projects to facilitate translocation effort
- Targeting 500 adult Pacific lamprey to be translocated from main stem dams to the Umatilla River and tributaries annually.

- Holding transported adults for overwintering at the South Fork Walla Walla River Adult Lamprey Holding facility and Minthorn Springs Adult Lamprey Holding facility

- Releasing over-wintered adults in the spring into the Umatilla River Basin

- Long-term monitoring of translocation success

John Day Dam Trapping Plan

- CTUIR is requesting to trap in the fishways at John Day Dam. The trapping hours requested would be up to 24 hours per day from mid-July until late August 2008. CTUIR would have all necessary collection permits, would complete safety talk, hazard analysis, and work plan documents according to USACOE criteria and prior to work beginning.

- Pot traps would be placed in the fishways in areas where no impact to salmonids is known (i.e. behind picketed leads of count stations, make-up channels, etc). Traps would be suspended from ropes tied off to hand railings or anchor points. These traps have been recently used by PSMFC staff at Bonneville dam with some success.

- CTUIR would request that USACOE staff provide insight into proper, suitable trapping locations within the North and South fishways at the dam.

- CTUIR would work University of Idaho staff (Chris Peery) to check pot traps when feasible. CTUIR staff would check traps every other day if not covered by U of I.

- CTUIR would have a slip tank trailer provided with oxygen available on-site to hold lamprey until pickup could be arranged.

- CTUIR would like to collect up to 530 annually which would include individuals from all main stem dam trapping operations (NOAA at Bonneville). Thirty individuals would be used for radio-telemetry study in Umatilla River.

- CTUIR would provide an accurate count of lampreys trapped daily and for the season to USACOE staff.

- Lead contact for CTUIR trapping operation would be Aaron Jackson, aaronjackson@ctuir.com, (541) 966-2385.

In summary, the CTUIR has been a forerunner in implementing tributary lamprey restoration actions in the Columbia Basin. The Umatilla program has shown successful spawning, rearing and outmigration of lamprey as a result of translocation. It is imperative that this program continue and CTUIR requests that this proposal be approved as a short-term solution to meeting CTUIR's yearly needs for Pacific lamprey. The success of trapping at John Day Dam will be reviewed and discussed at a Tribal/USACOE meeting in fall 2008.

2008 Water Supply Forecast Summary* - 7/10/2008

Basin	Station	Period	Jan. Final		Feb. Final		Mar. Final		Apr. Final		May Fi
			Probable	%	Probable	%	Probable	%	Probable	%	Probable
Columbia River	*Grand Coulee, WA*	Jan-Jul	61900	98	61100	97	62300	99	61200	97	59800
		Apr-Sep	63000	98	62700	98	65000	102	65200	102	63500
	The Dalles, OR	Jan-Jul	102000	95	103000	96	103000	96	101000	94	97300
		Apr-Aug	88200	95	91800	99	94300	101	94700	102	90900
		Apr-Sep	93500	95	97300	99	99900	101	100000	101	96300
Kootenai River	*Libby Inflow, MT*	Jan-Jul	5960	95	5960	95	6190	98	6080	96	5820
		Apr-Aug	5900	94	5960	95	6240	100	6210	99	5920
		Apr-Sep	6270	94	6330	95	6620	100	6590	99	6280
SF Flathead River	*Hungry Horse Inflow, MT*	Jan-Jul	1960	88	2050	92	2100	94	2140	96	2030
		Apr-Sep	1870	88	1970	93	2040	96	2120	100	2010
Snake River	*Lower Granite Inflow, WA*	Jan-Jul	27200	91	29500	98	29200	97	28000	93	26500
		Feb-Sep	27500	91	30800	101	30500	100	29200	96	27600
		Apr-Jul	19500	90	22200	103	23000	107	23300	108	21800
		Apr-Sep	21800	90	24700	102	25600	106	25700	106	24100
NF Clearwater River	*Dworshak Inflow, ID*	Jan-Jul	3500	99	3600	101	3580	101	3550	100	3320
		Apr-Jul	2610	99	2780	105	2920	110	3160	120	2930
		Apr-Sep	2770	99	2970	106	34140	112	3350	120	3110
Willamette River	*Salem, OR*	Apr-Sep	4720	98	5450	113	5440	113	5650	118	5720

*Data courtesy of Northwest River Forecast Center available at: http://137.161.65.209/water_supply/ws_fcst.cgi

FPP Change Forms

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Change Request Number:
Date: April 16, 2008
Proposed by: Bonneville Project
Location of Change- BON 5.4.6-5.4.7 and BON 6.5.1-6.5.2 (sections re-numbered as required)
Proposed Change:

5.4.6. *From 1 December through 30 April, non-priority turbine units will not be voluntarily scheduled for extended outages. Priority units are 1, 10, 11, and 18.*

5.4.7. *From 1 December through 30 April, turbines which have been idle/out of service for more than 12 hours will be started by slow rolling the unit after manually tipping turbine blades from flat to steep back to flat.*

After including the two sections above as 6.5.1 and 6.5.2-
The current 6.5.2 will be re-numbered to 6.5.4. Add "*bottom tail logs should be placed first."*
The current 6.5.3 will be re-numbered to 6.5.5. Add "*It is recommended adjacent units be operated to flush fish prior to placing tail logs in the unit to be OOS. It is also recommended that units located adjacent to OOS units not be voluntarily taken out of service until the adjacent units return to service."*
Reason for Change: To better protect sturgeon in the draft tube and turbine environment.
Comments from others: FPOM doesn't want priority units OOS during fish passage season.

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Change Request Number:
Date: 6/4/2008
Proposed by: Project Fisheries
Location of Change: BON-18 2.4.2.2.n.1
Proposed Change: 2.4.2.2.n.1 says "coordinate gatewell cleaning with smolt monitoring personnel operating the downstream juvenile sampling facilities". It should be moved to 2.4.2.2.m.3, which is the section on what to do when cleaning gatewells.
Reason for Change:
2.4.2.2.n.1 is in the wrong location.

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Change Request Number:
Date: 5/27/2008
Proposed by: The Dalles John Day Project
Location of Change- TDA 2.5.1.2.4 and JDA 2.5.1.2.a.4
Proposed Change: Omit from TD- 'Water velocities will be measured at one location directly and monitored during fishway inspections to verify channels are operating within velocity crtieria'.
Add to TD and JD – 'Water velocities will be monitored weekly during as part of the fishway inspection program. Project biologist will determine method. Results will be provided in weekly status report. (JD did not have the same wording as TD)
Reason for Change: Discussion and resolution determined through FPOM velocity task group

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Change Request Number:
Date: June 30, 2008
Proposed by: Tom Lorz CRITFC
Location of Change- FPP G-2, 4.2

Proposed Change: Change 4.2. *Sampling will be permitted 1-day per week from 0600- 1000 when water temperatures exceed 70°F to allow for mandatory steelhead sampling* to *Sampling will be permitted up to 4 days per week from 0600-1000 when water temperatures are between 70°F and 72°F.*

Reason for Change: To better meet the needs for data used by the US v Oregon parties and for the US/Canada Treaty fisheries groups in setting harvest limits and make management decisions. Currently large portions of the run are missed during these temperature outages making it difficult to estimate ocean abundance and stock specific escapements for fall Chinook for different critical population groups that drive decision by the harvest managers.
Comments from others: FPOM requested the hours be kept the same (0600-1000). An upper limit temperature needs to be added as well. This request doesn't include picket lead operation.
Final action: Mackey made the changes to the request. FPOM approved the increase in sample days at BON.
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Change Request Number:
Date: July 10, 2008
Proposed by: Tom Lorz CRITFC representative
Location of Change- Appendix G-2 Bonneville Adult Sampling 4.2
Proposed Change: Currently there is no discussion on Picket Leads when temperatures are more than 70 deg.

We Propose the following:
During sampling hours up to 4 picket leads would be used for the first 3 hours of sampling to insure the number of fish needed for sampling are achieved. All picket leads would be raised in the last hour of sampling.

Reason for Change:
Under current operations 2-3 picketed leads does not appear to adequately insure the number of Chinook and steelhead needed to meet sample and statistical needs for the research and monitoring being conducted at AFF. There does not appear much difference in numbers of fish sampled between 2 and 3 picketed leads. Four picketed leads does appear to significantly improve the ability to achieve sampling rates. This monitoring supports the data needs of the Pacific Salmon Commission's U.S. Chinook Technical Committee, U.S. v. Oregon's Technical Advisory Committee, Harvest Biop implementation and the Columbia River Accords for monitoring ocean abundance, in-season harvest, run reconstruction and forecasting, and stock specific escapement of Chinook and sockeye salmon, and steelhead.
Comments from others: NOAA Fisheries didn't want to have four leads down. BON Fisheries didn't want to have four leads down. CRITFC was making the request. No other agency representatives were present or on the phone.
Record of Final Action: Not approved.
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June 2008						
Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
1	2 LGO ERDC trip	3 FPAC LGO ERDC trip	4 TMT LGO ERDC trip	5 LGO ERDC trip	6 LGO ERDC trip	7 LGO ERDC trip
8 LGO ERDC trip	9 LGO ERDC trip	10 FPAC LGO ERDC trip AFEP 1-pg review	11 TMT LGO ERDC trip	12 FPOM Meeting- JDA NWD tour of JDA	13 NWD tour of BON	14
15	16	17 FPAC	18 TMT	19 SCT	20	21
22	23 LGO ERDC trip-agencies	24 FPAC LGO ERDC trip-agencies	25 TMT LGO ERDC trip-agencies AFEP comments	26 NWP FFDRWG LGO ERDC trip-agencies Lamprey	27 LGO ERDC trip-agencies AFEP 1-pg	28
29	30					

July 2008

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 FPAC	2 TMT	3	4  Independence Day	5
6	7 Pinniped Task Group	8 FPAC Happy Birthday	9	10 FPOM Meeting-NOAA	11	12
13	14	15 FPAC	16 TMT	17 SCT	18	19
20	21	22 FPAC Happy Birthday	23 TMT NWW FFDRWG	24 NWW FFDRWG	25	26
27	28	29 FPAC	30	31		

August 2008

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5 FPAC	6 TMT	7	8	9
10	11	12 FPAC AFEP pre-proposals sent out	13 TMT	14FPOM- BON Velocity and VBS task groups	15	16
17	18	19 FPAC	20 TMT	21 SCT	22	23
24	25	26 FPAC AFEP pre-proposal review	27 TMT AFEP pre-proposal review	28 NWP – FFDRWG AFEP pre-proposal review	29	30
31 Spill Season ends						

September 2008

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 Labor Day	2 FPAC B2CC closed.	3 TMT	4	5	6
7	8	9 FPAC Happy Birthday	10 TMT	11 FPOM Meeting-NOAA	12	13 Happy Birthday
14	15	16 FPAC	17 TMT	18 SCT	19	20
21	22	23 FPAC AFEP pre-proposal comments due	24 TMT	25	26	27 Happy Birthday
28	29	30 FPAC				

CENWP-OD 16 July 2008

MEMORANDUM FOR THE RECORD

Subject: DRAFT Minutes for the 16 July 2008 FPOM sub-group meeting to discuss lamprey trapping at JDA and AFF picket lead criteria at BON.

The meeting was held in the Sockeye Room at CRITFC, Portland. In attendance:

Last	First	Agency	Office	Email
Clugston	David	USACE	503-808-4751	David.a.clugston@usace.army.mil
Cordie	Bob	USACE	541-298-7406	Robert.p.cordie@usace.army.mil
Ellis	Stuart	CRITFC		
Fredricks	Gary	NOAA	503-231-6855	Gary.fredricks@noaa.gov
Fryer	Jeff	CRITFC	503-731-1266	FRYJ@critfc.org
Hausmann	Ben	USACE	541-374-4598	Ben.j.hausmann@usace.army.mil
Jackson	Aaron	CTUIR		
Klatte	Bern	USACE	503-808-4318	Bernard.a.klatte@usace.army.mil
Lorz	Tom	CRITFC	503-238-3574	lort@critfc.org
Mackey	Tammy	USACE	503-808-4305	Tammy.m.mackey@usace.army.mil
Peery	Chris	Univ. Idaho		
Rerecich	Jon	USACE	541-374-7984	Jonathan.g.rerecich@usace.army.mil
Whiteaker	John	CRITFC	503-238-3562	

Bob Cordie, Ben Hausmann, Aaron Jackson, Bern Klatte, Chris Peery and Jon Rerecich called in.

1. **Lamprey protocols**. The following lamprey protocols were discussed by the group.

Protocol for deploying and checking pot traps at John Day Dam- from A. Jackson

* Traps will be deployed behind picket leads in the north and south fishways. Traps will be suspended from ropes tied off to hand railing or anchor points and placed on the bottom of fishway floor. Traps will be positioned so entrance to traps are facing downstream.
* Latex gloves will be worn when deploying and recovering traps to minimize human smell in the fishways.
* Lampreys collected will be placed into coolers or buckets and transferred to transport tank supplied with oxygen and then transferred to tribal adult lamprey holding facility.
* Traps will be fished up to 24 hours per day and checked every other day during daylight hours. Daily and yearly catch totals will be provided to USACOE staff.

1.1. Jackson talked about the requested protocols. He said the trap will be between the count station picket leads. Collected lamprey will be placed in a bucket or cooler then transferred to the CTUIR facilities. The trap would be checked once a day or every two days. Daily and annual catch totals would be provided to the Project Fisheries and Tammy Mackey. University of Idaho would also be available to assist with trap checking. This is to help meet the lamprey collection goals of tribes. There won't be any bait or lure used to get the lamprey into the trap. It seems to be more of a hiding place that lamprey like.

1.2. Jackson would like to deploy the trap as soon as possible, just waiting on permission. Fredricks will be in the area on 22 July so he will stop in to check out the trap. Cordie would like to meet with Jackson to discuss some additional sites for trap placement as well. **FPOM representatives in attendance said OK to the trapping.**

2. AFF picket lead criteria. CRITFC requested additional picket leads during 70°F> water temps.

2.1. Whiteaker said CRITFC has received permission to extend sampling when the water temps are between 70°-72°F from one day a week to four days a week. The current request is to increase the number of picket leads down from two to four for three hours/day, four days/week in high water temp conditions.

2.2. Clugston asked a few questions about the CRITFC proposal. CRITFC's research is for harvest management and to discover what goes on with fish in the upper Columbia river. Whiteaker included more information about the funding sources and project background. He said the information is used by TAC and the PSTC

2.3. Clugston asked about the minimum sample sizes needed. He wanted to know what minimum number is needed to gain useful information. Fryer said it depends on the degree of precision. At this time Lorz arrived and Peery called in.

2.4. Fredricks expressed his concern about relaxing the current criteria. He explained the purpose of the heavily deliberated criteria is to protect fish, especially during those higher (potentially lethal for salmonids) water temperatures.

2.4.1. While he is not inclined to agree to more leads he is interested in further discussion regarding modifications to the trap and the ladder. Modifications won't happen this year, but now it the time to get started. The problem seems to be finding the funding since USACE says they don't need the trap but, apparently, the Region still wants to use it quite a bit. He would like to find better ways to get data, to hand fish and to make this work for all parties. He mentioned some options such as a parallel ladder to help sub-sample the ladder.

2.4.2. He talked about the CRITFC handout. He commented that it is only one year of data and reiterated that fish enter the fishway in the morning but spread out and pass the window all day long. The Washington Shore is an important ladder for fish. He wasn't arguing the handling effects but rather the impacts to all the fish traveling up the WS ladder.

2.4.3. He recognizes the needs of CRITFC and how, if there is an open lead, fish will find it however, NOAA criteria for their permits used to be sampling up to 68°F. He isn't sure what happened to that cutoff and admitted it might have been a bit conservative, but feels that restricting sampling as much as possible at 70°F is appropriate. He did a literature search and nearly every one indicates the tolerance limits are in the 70°Fs. Basically, he isn't going to agree to more leads down.

2.5. Fryer talked about the difficulty in getting steelhead from mid-July to mid-August. The run timing of steelhead falls roughly at the same time as the water temp protocols go into effect.

2.6. Ellis explained the need for the information on the B-run steelhead. The tribal fall season fishery is limited by impacts to B-run steelhead. The only way they know how many B-run fish are in the system is by the information gathered at the AFF. Fredricks asked about the determination of a B-run steelhead. It doesn't exist at a genetic level, the determination is based on size. If it is based on size, why can't that be determined at the count stations? Ellis responded that too many of them are too close to the cutoff point. The discussion went around the jack chinook measurements that can be taken at the window.

2.7. Fredricks then asked how accurate the count has to be. Ellis said it has to be accurate enough to know when the impact limit has been met. Fredricks said the count windows have been used for a long time with judgment calls made, there is no reason that can't be used here. Ellis said if NOAA can get them the numbers of B-run fish…these are fish 78cm or greater. A and B run fish overlap quite a bit. The length determination is arbitrary but it is the requirement so CRITFC is stuck with it right now. Fryer knows of some systems that might work but the overlap issue is problematic. There doesn't appear to be a real separation, which begs the

question “why do we use it”? Can CRITFC find ways to compare window counts with the AFF sampling data?

2.8. For harvest purposes, CRITFC need the A-run/B-run ratios to determine impacts from harvest. Without better data, the tribal fishermen are restricted based on squishy numbers and they become unhappy with that. Fredricks understands the need and the concern, but the easy way to get data isn’t the best way for fish. One way to get people to change is to make it uncomfortable and now is the time to do that with this particular sampling method. Originally CRITFC suggested basing harvest rates on numbers of wild steelhead but NOAA Fisheries said no so they are in the position they are now. Fredricks commented that he would be happy to carry this discussion back to NOAA.

2.9. Ellis agreed the AFF was in need of replacement but CRITFC doesn’t have that kind of money and suggested it was the federal government’s responsibility to replace the trap. Why do the tribal fishermen have to suffer because the federal government won’t make the repairs? Fredricks suggested this may be a Regional issue since many stakeholders use the facility.

2.10. Clugston commented that CRFM is pretty full right now, for several years. While there may be fluff that could be cut, there are already many expensive commitments already in the budget.

2.11. What is the next step? Can CRITFC use the count windows? Can we look at other ways to reduce sample sizes and still get the level of precision needed? If window counting is used, you won’t get the age composition, which would mess up the forecast. Fredricks commented that while that may be true, this year CRITFC will have a 400% increase in the number of sampling days. Lorz responded that they were penalized though with only two leads. Mackey said that three leads were allowed in the past, at which point Lorz said three was better than two. Mackey responded that at FPOM, CRITFC made the argument that three leads did not improve their catch rate over two leads.

2.12. Whiteaker commented on the thermal barrier for chinook. Steelhead don’t seem to have the same thermal barrier behavior as chinook. He would like to use the AFF for future A/B run studies, but it will require actual handling of fish. It is very important data, with a lot of information coming out of the studies. He also mentioned there may be other funding sources CRITFC may explore. Fredricks would like to push for NOAA funding as well.

2.13. The question was asked about the error bounds from past years. CRITFC said it had ridiculous error bounds that weren’t of much use. It was also commented that the states slice and dice the data so much that CRITFC now just sends the raw data for them to do what they will.

2.14. BON Project Fisheries was asked to comment. They agreed with Fredricks. They commented on the fact that the number of fish wanted seems very large. It would be easier to make decisions about picket leads if there was a clear number needed, as opposed to the number wanted. With so many questions to answer, perhaps the numbers needed or wanted are just too large. Fryer responded to that with the numbers requested for each species and project. He has a hard time answering the question of how many are needed since and increase in numbers increases the precision and that is, ultimately, what they are after.

2.15. Discussion continued about various ways of getting information without handling so many fish. It included PIT tagging juveniles, outfitting every facility with PIT tag detectors, etc. Fryer would like to do an analysis on the PIT tagged fish CRITFC handles and compare that to those coming from other areas to compare return rates.

2.16. In the end it was decided that the picket leads would remain at two. Hopefully this promote further internal discussions within NOAA Fisheries and people can get creative about finding solutions that meet the needs of everyone and the fish.

2.17. Fredricks asked why CRITFC requested four days. The answer was that it matched Lower Granite and they were trying to be consistent. The budget can only really accommodate five days a week, with the fifth day really being used for data entry.

The meeting adjourned at 1100.

Memorandum

To: Tom Lorz
From: Jeff Fryer

Re: Use of Washington shore fish ladder and affects of raising pickets on AFF sampling.

Washington Shore Fish Ladder use

At last week's FPOM meeting, there seemed to be general agreement that, at high temperatures, fish pass the Washington shore ladder first thing in the morning and would be most impacted by our sampling from 6 AM to 10 AM. Therefore, I requested the 2-2007 hourly fish passage data by ladder from the Fish Passage Center.

With regard to the usage of the two ladders, it appears Chinook don't start favoring the Washington Shore fish ladder until roughly September 1. During the month of August 2007, 53% of Chinook salmon passing Bonneville Dam passed the Bradford Island counting station (Figure 1). Steelhead, on the other hand did favor the Washington shore fish ladder except from roughly Aug 20-Sep 1 (Figure 2).

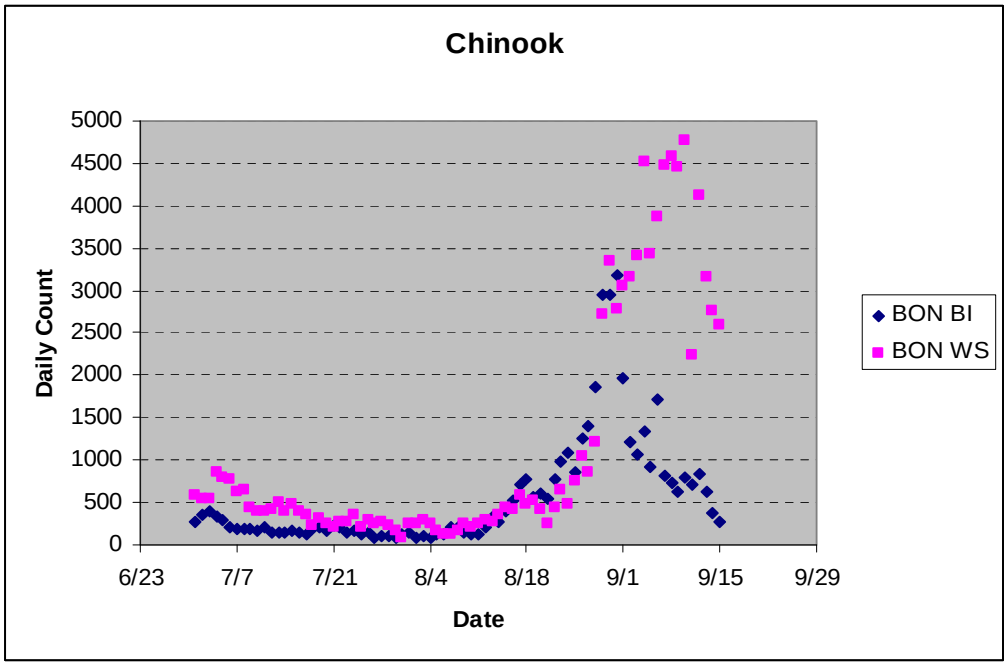

Figure 1. Daily passage of Chinook salmon past the Bonneville Dam Bradford Island and Washington Shore fish ladders between July 1 and September 15, 2007.

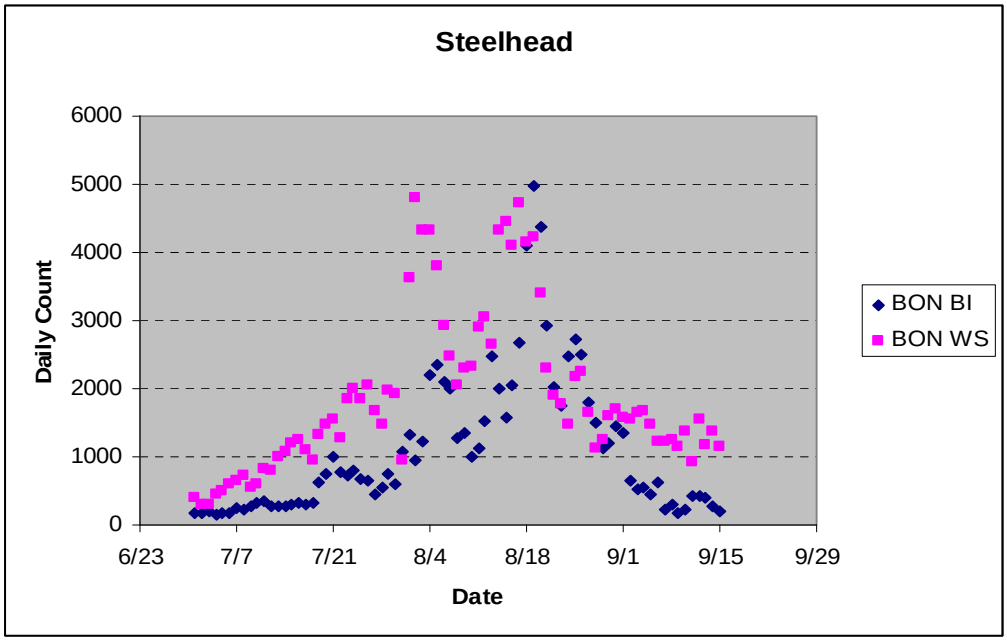

Figure 2. Daily passage of steelhead past the Bonneville Dam Bradford Island and Washington Shore fish ladders between July 1 and September 15, 2007.

The assumption that Chinook and steelhead pass primarily during the early morning hours also is not borne out by the data. Between 5 AM to Noon PDT from August 1 to August 31, 42.6% of steelhead 39.0% of Chinook passed the Washington Shore fish ladder. This compares to 43.75% that would be expected to pass if the daily run was uniformly distributed between 5 AM to 9 PM. (From July 15-Sept 15, 37.9% of Chinook and 41.7% of steelhead passed between 5 AM to noon PDT.) Chinook and steelhead were actually more likely to pass in the afternoon and evening than in the morning (Figure 3).

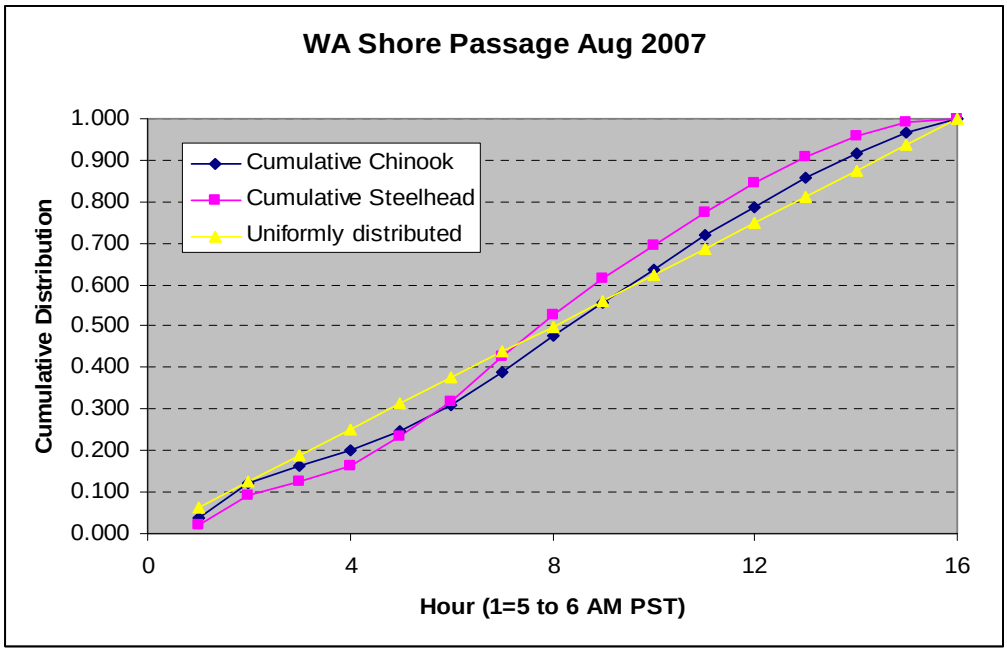

Figure 3. Cumulative hourly distribution of Chinook and steelhead passage from August 1 to August 31 at the Washington Shore fish counting window compared to what would be expected if the hourly distribution was uniform.

Recent impact of raised picket leads on our sampling

On July 7, we were allowed to have four picket leads down during the entire time that we sampled instead of for just the first hour. The result was a dramatic increase in the number of Chinook salmon sampled despite a steadily declining run (Figure 4) with our daily sample more than doubling. Our steelhead sample size also more than doubled, although an increasing run likely also contributed (Figure 5).

Effect of restrictions on PIT tag research

One of the studies that we conduct is funded by the Pacific Salmon Commission and requires deployment of 700 PIT tags roughly distributed proportional to the run. Due to the sampling restrictions imposed at Bonneville Dam, as well as our efforts to coordinate with USACE-Walla Walla and the USFWS on another research program, we have fallen short of our goal. Through July 11, we had PIT tagged a total of 510 fish, but only 399 with 12 mm tags, which is not only short of our goal (about 600 by now), but also the weekly distribution is skewed highly towards the last week when we were allowed to have all four picket leads down (Figure 6).

The cooperative research program required us to PIT tag 33% of the Chinook and sockeye we sampled at Bonneville Dam with 8.5 mm tags. This was done because these tags are increasingly being used on juvenile salmon but their detectability in adult ladders is unknown but it was expected that they should be similar to that of 12.5 mm tagged fish. This proved to be the case at USACE dams but, in early July, after significant numbers of sockeye and Chinook salmon reached the mid-Columbia, I found that mid-Columbia dams appear to do poor enough at detecting 8.5 mm tags that I likely will not be able to use the results for many of the purposes of the PSC study. Given our low sample sizes, we discontinued testing the 8.5 mm tags.

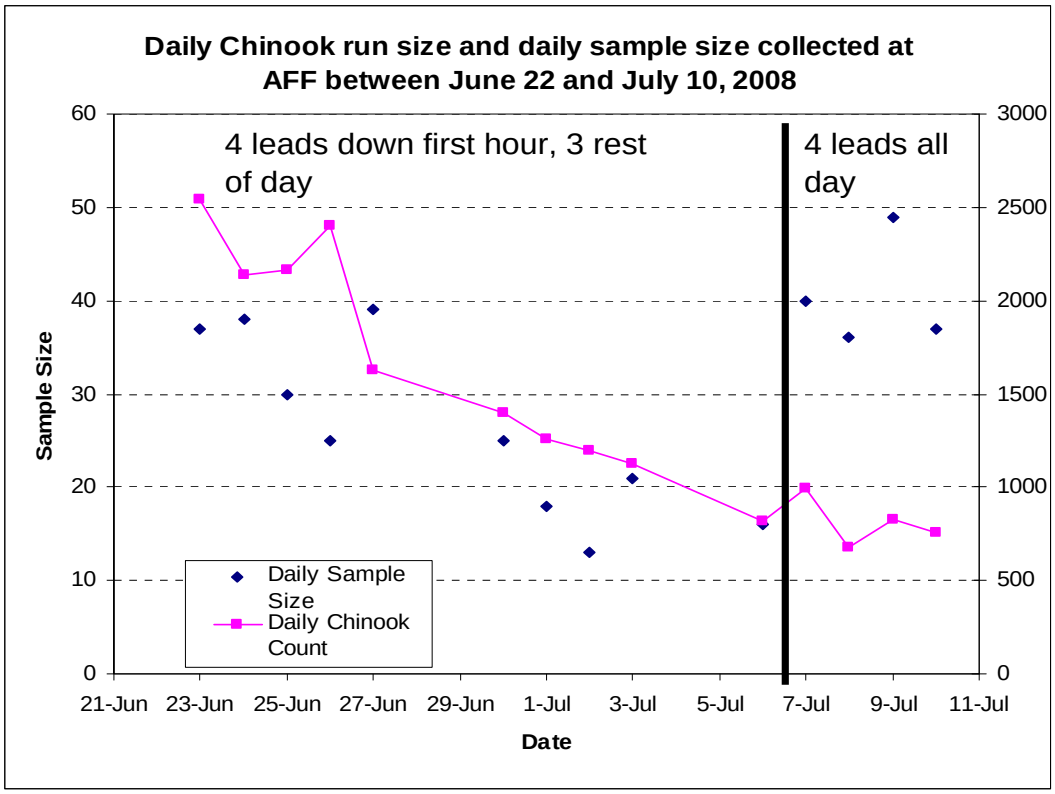

Figure 4.

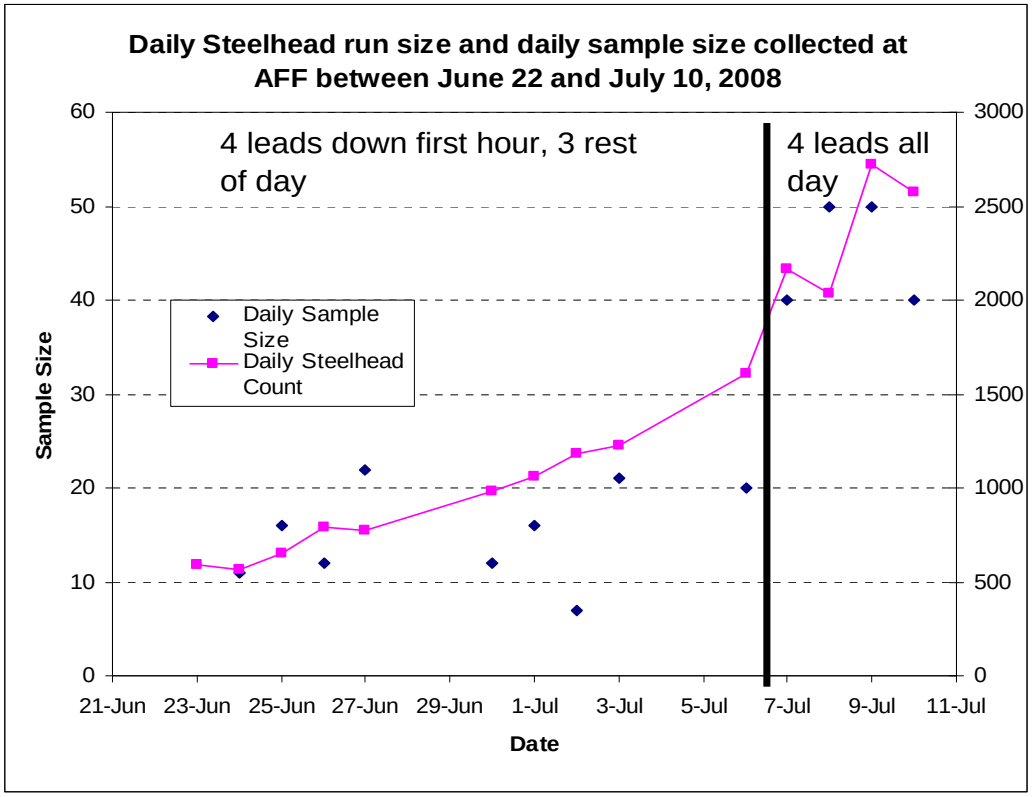

Figure 5.

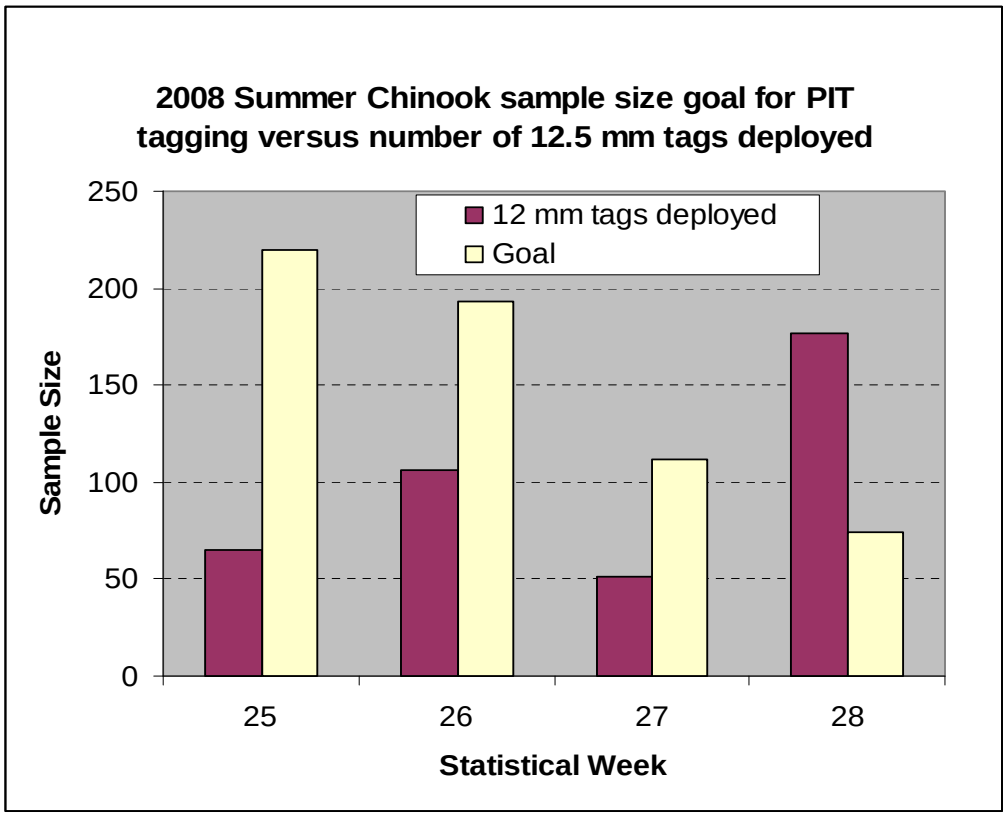

Figure 6.