

MEMORANDUM FOR THE RECORD

Subject: Final minutes for the 09 May 2013 FPOM meeting.

The meeting was in the CRITFC Celilo Room, Portland, OR. In attendance:

Last	First	Agency	Office/Mobile	Email
Baus	Doug	NWD-RCC	503-808-3995	Douglas.m.baus@usace.army.mil
Benner	Dave	FPC		
Bettin	Scott	BPA	503-230-4573	swbettin@bpa.gov
Chockley	Brandon	FPC		bchockley@fpc.org
Conder	Trevor	NOAA	503-231-2306	Trevor.conder@noaa.gov
Cordie	Bob	NWP-TDA	541-506-7800	Robert.p.cordie@usace.army.mil
Dugger	Carl	NWW-MCN	541-922-2263	Carl.r.dugger@usace.army.mil
Fredricks	Gary	NOAA	503-231-6855	Gary.fredricks@noaa.gov
Hausmann	Ben	NWP-BON	541-374-4598	Ben.j.hausmann@usace.army.mil
Hevlin	Bill	NOAA	503-230-5415	Bill.hevlin@noaa.gov
Klatte	Bern	USACE-NWP	503-808-4318	Bernard.a.klatte@usace.army.mil
Lorz	Tom	CRITFC	503-238-3574	lort@critfc.org
Lut	Agnes	BPA		axlut@bpa.gov
Mackey	Tammy	USACE-NWP	503-961-5733	Tammy.m.mackey@usace.army.mil
Martinson	Rick	PSMFC		rickdm@gorge.net
Meyer	Ed	NOAA	503-230-5411	Ed.meyer@noaa.gov
Petersen	Christine	BPA		
Rerecich	Jon	USACE-NWP	503-808-4779	Jonathan.g.rerecich@usace.army.mil
Setter	Ann	USACE-NWW	509-527-7125	Ann.l.setter@usace.army.mil
Scott	Shane	NWRP	360-576-4830	Sscott06@earthlink.net
Stansell	Robert	NWP-FFU	541-374-8801	Robert.j.stansell@usace.army.mil
Wills	David	USFWS	360-604-2500	David_wills@fws.gov
Wright	Lisa	USACE-RCC	503-808-3943	Lisa.S.Wright@usace.army.mil
Zorich	Nathan	NWP-FFU	541-374-8801	Nathan.a.zorich@usace.army.mil
Zyndol	Miro	NWP-JDA	541-506-7860	Miroslaw.a.zyndol@usace.army.mil

Dugger, Meyer, Moody, and Setter called in.

No May birthdays

1. Finalized results from this meeting.

- 1.1. [Apr 13] Hazing activities. **ACTION:** Include a hazing appendix to the FPP. Include sea lion hazing guidelines and avian hazing guidelines. Hausmann wanted to discuss the proximity of sea lion hazers to the fishways. Stansell said early on, there were instances of the boat hazers but that should have been corrected. Hausmann said there was a recent occurrence of the hazers in the plume of the Washington Shore fish entrance. **FPOM decided they need to go back and revisit the sea lion hazing requirements. FPOM has concerns about firing under water, using seal bombs in the BRZ, proximity to fishways, etc.**
- 1.2. [Apr 13] Bettin asked if MCN would be raking trash 8 – 11 July, so it coincides with the BPA RAS testing. **ACTION:** Dugger will talk with MCN and Bettin to see if that can be accommodated. **STATUS:** *Bettin said more discussion is needed with TBL. He is still trying to get the raking and RAS testing to occur at the same time. FPOM was*

fine with operating out of unit priority; with units 1 and 14 being done in the afternoon to minimize impacts to fish passage.

- 1.3. TDA spillbays. Bay 9 v Bays 10/11. **FPOM agrees with prioritizing Bays 10/11.**
- 1.4. 2014 FPP change forms.
 - 1.4.1. **14BON001** Lorz provided the change form and supporting documentation. **CRITFC, NOAA, USFWS support the change form. IDFG was absent. ODFW supported it at the last meeting, but no rep was at the May FPOM. BPA and USACE need to take this back to their chain of command.**
 - 1.4.2. **14TDA001** Wicket gate opening. **Approved with the change to 15 minutes.**
 - 1.4.3. **14JDA001** Wicket gate opening. **Approved.**
 - 1.4.4. **14LMN001** Unit 1 change in priority. **FPOM concurs.**
- 1.5. Memos of Coordination
 - 1.5.1. **13TDA04** BPA RAS testing. **Approved.**
 - 1.5.2. **13MCN06** Oregon shore adult fishway entrance weirs. **Approved.**
 - 1.5.3. **13IHR08** – 3D cam replacement and MU cooler inspection testing. **Approved.**
 - 1.5.4. **13LGS01A** LGS spillway gate / stop log / diesel generator testing. **Approved.**
 - 1.5.5. **13LWG03** LWG powerhouse roof repair. **FPOM is ok with the 24 hour operation.**
- 1.6. Critical spare parts- spare transformers. **FPOM agrees this is a high priority and should be followed up.**
- 1.7. *NWP Special FFDRWG for BON Ops. Fredricks, Conder, Lorz, Wills concurred with the COE recommendation to not move forward with next week's run of the river fish testing of the TRD.*

2. The following documents were provided or discussed. Documents may be found at <http://www.nwd-wc.usace.army.mil/tmt/documents/FPOM/2010/>

- 2.1. *Agenda, Fish Passage O&M Coordination Team.*
- 2.2. *Cooling Water Strainers Lamprey Counts.xls.*
- 2.3. *Coordination/Notification Forms (NWW/NWP)*
- 2.4. *Takabayashi Critical Spares documents.*
- 2.5. *FPP change forms. (NWW/NWP)*

3. Action Items

3.1. NWW Action Items.

- 3.1.1. [May 13] Avian Task Group. **ACTION:** Setter/Fone will help create a Task Group and have a kick-off meeting in June.
- 3.1.2. [May 13] BPA RAS testing at MCN. **ACTION:** Dugger and Bettin will put together a MOC; Conder will provide a preferred unit priority.
- 3.1.3. [May 13] LWG ADCP data collection. **ACTION:** Setter said they will send out an updated MOC prior to making a decision on whether to go ahead with the operation

3.2. NWP Action Items

- 3.2.1. [Feb 13] BON AFF PIT tag detector. **ACTION:** Fryer will have detailed drawings, an operating plan, and monitoring plan for FPOM review in October.
- 3.2.2. [Apr 13] Hazing activities. **ACTION:** Include a hazing appendix to the FPP. Include sea lion hazing guidelines and avian hazing guidelines. Hausmann wanted to discuss the proximity of sea lion hazers to the fishways. Stansell said early on, there were instances of the boat hazers but that should have been corrected. Hausmann said there was a recent occurrence of the hazers in the plume of the Washington Shore fish entrance. **FPOM decided they need to go back and revisit the sea lion hazing requirements. FPOM has concerns about firing under water, using seal bombs in the BRZ, proximity to fishways, etc.**
- 3.2.3. [Apr 13] BON VBS Task Group. **ACTION:** Fredricks and Hausmann will write up a change form to update the language for when screens will be re-installed. **STATUS:** *change form submitted on 8 May.*
- 3.2.4. [Apr 13] FPOM meeting location. **ACTION:** Wills will check availability of his office for the July FPOM.
- 3.2.5. [May 13] Sea Lion Task Group. **ACTION:** Stansell will chair the TG. The first meeting will be after the June FPOM meeting.
- 3.2.6. [May 13] BON Unit 8 return to service testing. **ACTION:** Hausmann will provide the anticipated number of hours of operation at the low end of 1% and the upper end of 1%. Mackey will forward that information to FPOM. **STATUS:** *Typically it only takes one day. First I am going to start up and shutdown, without going online, a couple of times to ensure our new control system works. Then I will go online. I usually go to the 1% band and start there. I move the unit up and down in a series of steps. I am usually able to keep it within the 1% band for the first tests. The tests take about 10 minutes. Once I get the unit dialed in at the small tests, I move to larger tests. The larger tests will take us outside of the 1% band and then return to it. I am thinking it will be outside the band for up to 10 minutes. I will do several of these tests. Once satisfied with the unit response, I will have to do several full shutdowns from the 1% band to offline. Then go from offline back to the 1% band. After that, all tests will be done from within the 1%. This is a tuning procedure and every unit is different. The responses I get drive how the next steps go, and so on. But that is the general process. Let me know if you need any further info, Rob Troyer Electronic System Control Craftworker. **CRITFC had no issues with the testing.***
- 3.2.7. [May 13] BON JMF Separator Bar contract and condition sub-sampling. . **ACTION:** Lorz said they will take the proposal to roll the sub-sampling into the SMP contract it to FPAC and Bettin will broach the subject again with BPA contracting.
- 3.2.8. [May 13] BON Kelt Monitoring. **ACTION:** NWP will develop a proposal for kelt monitoring from 1 March through 10 April. They will bring this back to FPOM for further discussion and development.

- 3.2.9. [May 13] 14BON001 BON change form. . **ACTION:** FPOM will take the change form to their respective agencies and bring their position back to the June FPOM meeting.
- 3.2.10. [May 13] BON WS Lamprey flume LPS pump installation. **ACTION:** Tackley to submit a MOC requesting concurrence for pump installation during 20 – 22 May.

3.3. Action Items completed or to be discussed later in the agenda.

- 3.3.1. [Mar 13] BPA updates. **ACTION:** Need to develop MOCs for those outages that take the Projects out of criteria (TDA Unit 18 and MCN). **STATUS: completed for TDA. See MOC 13TDA04 BPA RAS testing.**
- 3.3.2. [Apr 13] LWG collection channel study. . **ACTION:** Trachtenbarg will work with Fone to develop a MOC for this study and operation. **STATUS:** MOC sent out to FPOM members on April 17, with no objections received. Approved.
- 3.3.3. [Apr 13] 13AppG002 IHR Updated Adult Trapping Operations. **ACTION:** Pinney will update the change form after the FPOM discussion and send it to Fone for formal FPOM concurrence. Updated in consultation with NOAA Fisheries and University of Idaho. Final version sent out to FPOM members on April 26, with no comments received. Approved.
- 3.3.4. [Apr 13] Bettin asked if MCN would be raking trash 8 – 11 July, so it coincides with the BPA RAS testing. **ACTION:** Dugger will talk with MCN and Bettin to see if that can be accommodated. **STATUS: concurrent raking and RAS testing is not likely to happen. The RAS testing requires unit outages for a different (perhaps shorter) periods of time than trash raking does. The crane will not be available for both activities to occur concurrently. Bettin said more discussion is needed with TBL. He is still trying to get the raking and RAS testing to occur at the same time. FPOM was fine with operating out of unit priority; with units 1 and 14 being done in the afternoon to minimize impacts to fish passage. ACTION: Dugger and Bettin will put together a MOC.**
- 3.3.5. [Apr 13] Kelt Video Counting. **ACTION:** Klatte will check with FFU to see when the video monitoring stopped. **STATUS: Kelt video counting ended March 25 when the DVR was full, but they were only read through March 22 (we had already met CC open criteria. The old camera and video system is and always has still been present and PSMFC can use that anytime. We pulled our camera and DVR out as PSMFC stated they had no funds to review additional video and had no intent to use our system and John will be using much of the equipment this summer anyway.**
- 3.3.6. [Mar 13] JMF and SMF condition sub-sampling data. **ACTION:** Mackey will outline the data that will be lost by stopping sub-sampling information. **STATUS: discussed later in the agenda.**
- 3.3.7. [Apr 13] Sturgeon Task Group. **ACTION:** The task group will write up the change form and submit at the May FPOM. **STATUS: to be discussed later in the agenda.**

4. Updates

4.1. NWW Updates

- 4.1.1. LMN hydrocannon repaired on April 18.
- 4.1.2. Trash at MCN- need to coordinate a debris spill prior to removing TSW's. Debris is mostly tumbleweeds. Dugger reported there is some woody debris

but mostly tumbleweeds that are sinking. The build-up is mostly in front of the units, debris at the spillway seems to pass through. Bettin asked if the boat could be available before spill ends in August.

4.1.3. LWG ADCP without spill. Setter reported the make-up spill will not be an option. NOAA and CRITFC asked for more details instead of just “no”. BPA and USACE asked what the biological benefit would be. Lorz said it appears we will be reaching the peak of the juvenile run and didn’t feel the spill was an unreasonable request. Setter said, as the conditions change, NWW may come back to FPOM to double check this position. Wright explained that there wasn’t a biological benefit to increasing spill to provide the make-up spill. Setter added that in the past, there was support for transportation during this timeframe and the rejection of the increase in spill falls along those lines. Fredricks expressed concern about the process of saying no without justification. Wright said the original proposal was to make the operation spill neutral, it didn’t include any biological benefits. Wright said it is not policy to make operations spill neutral without biological benefits. Setter wrapped up the conversation saying they welcome more comments on the MOC. Baus and Lorz discussed the biological benefit justification. Lorz said increasing spill, to gas cap, at night may divert more fish away from turbines and through the spillway. Wright said the proposed date for this data point gathering is June 2nd or June 3rd. Fredricks reiterated the final plan needs to be coordinated. Setter agreed and said before planning for moving forward NWW would come back to FPOM for discussion and, hopefully, concurrence. Bettin said this needs to be wrapped up in about two weeks. **ACTION: Setter said they will send out an updated MOC prior to making a decision on moving ahead with the operation.**

4.2. NWP Updates

- 4.2.1.** BON A-Branch/ FV3-7 leak investigation. No update. Waiting on a third party test for chlorine. BON is looking at having the FV3-7 operation curve reevaluated. Hausmann is working with Schlenker. Fredricks asked if Project Fisheries plunked the area to make sure the grating was still in place. Hausmann said they did. It was determined that the majority of leakage is coming from the AWS joints. These are old leaks and are monitored. There was slight detect of chlorine in the water. We did some recent tests of the leakage water and compared it to general river water near the BI fishladder exit and found that there is a small residual detect of Chlorine in the river water. Therefore we do not think we have a potable water leak along the A-Branch but will continue to take and test samples over the summer to see if there are any changes.
- 4.2.2.** BON Updated Dewatering Plans. In process but not yet available.
- 4.2.3.** BON unit 8 RTS testing needs. 21-23 May testing of Unit 8 before returning to service. This testing is needed as part of the commissioning of the unit. Hausmann believes this should be covered in the FPP. Fredricks asked how long the operation outside 1% would occur. This testing must occur in order to bring Unit 8 back in service. **ACTION: Hausmann will provide the anticipated number of hours of operation at the low end of 1% and the upper end of 1%. Mackey will forward that information to FPOM.**
- 4.2.4.** CI entrance frame. BON removed the upper sections of the frame. This has stopped the rattle. The same thing happened at B-Branch as well.
- 4.2.5.** TDA spillbays. Bay 9 v Bays 10/11. **FPOM agrees with prioritizing Bays 10/11.**

4.2.6. Scrap metal. Mackey provided an update. She is working on getting a contract to remove the BON TIES, the B1 juvenile flume at the JMF, the old fish lab pipes on CI, etc. Comment from BON Tech Staff- Getting rid of the TIE's! That would be great. Note that there probably is lead paint on some/all of the remaining TIE's. Not a big deal for the recyclers but the persons cutting them up on site and shipping the pieces out need to provide lead abatement and containment.

4.3. Research/FFDRWG updates. Approval letters, permits, etc located at www.nwd-wc.usace.army.mil/tmt/documents/FPOM/2010/NWP%20Research/Research.html

4.3.1. BON TRD. Special FFDRWG after the May FPOM. The PDT recommends not moving forward with testing of run of the river fish. Conder said the only reason to test run of the river is that fish get larger and show different impacts. If needed, the TRDs could be included in the scrap metal contract Mackey is working on. Rerecich provided some information about the test results, but more detailed discussions will occur at the special FFDRWG following FPOM. Wright asked if the fish not recaptured died in the gatewell. Rerecich reported that is unknown but observations when the VBS was cleaned suggested that there were not enough fish observed on the VBS to account for all the non recaptured fish. Rerecich said he has questions about guidance when operating the unit at the upper end.

9 May 2013 Special NWP FFDRWG- BON TRD. Medina and Henrie joined us on the phone. Rerecich said the process went well but the outcome wasn't what was expected. Fredricks asked for the hydraulic data. Henrie said it appears the TRD did what it was supposed to. Fredricks suggested moving on to other alternatives. Fredricks, Conder, Lorz, Wills concurred with the COE recommendation to not move forward with next week's run of the river fish testing of the TRD.

4.3.2. AFF modifications. Hausmann reported the mods are moving along.

4.4. RCC update.

Project	Previous day average (kcfs)	5 day forecast (kcfs)	10 day forecast (kcfs)
LWG	77	124	108
MCN	266	299	323
BON	258	312	312

4.5. Pinniped update. Stansell reported there is a trap up near TDA. The trap isn't working just yet; it's new and not positioned in the water correctly. One of the sea lions spotted is estimated at 1200 lbs. Since 2012 TDA has been recording sightings as have the tribes. Fredricks said he would like to see this, even though it's anecdotal, in the annual report. States trapped and branded 3 CSL today, none for removal, total 2 euthanized, 2 to aquarium so far this year. CSL numbers and predation up this week, SSL numbers dropping and predation slowing down for them. Sea Shepherd's RV rolled into bathrooms at Ft. Cascades damaging RV mostly.

4.6. Lamprey updates.

4.6.1. BON WS lamprey structure. BON WS lamprey flume LPS (LPS at terminus of the flume system, installed by University of Idaho) found to have a few cracked welds to deal with and other details to correct before operation. The finish work and welds are currently being fixed. LPS pumps have not yet been installed, as the housing brackets were not

designed to fit in the desired location and did not allow for removal of the pumps for cleaning purposes. University of Idaho has altered the pump bracket design and would like to install between 20-22 May (**ACTION: Tackley to submit a MOC soon**). Tackley has scheduled a meeting on 20 May to discuss operations of the flume. The expectation is to have the entire flume system running by the end of May. FPOM will take a look at it during the June FPOM. Update: BON Maintenance repaired welds on the flume structure.

- 4.6.2. BON CI LPS mods. The LPS is finished to the exit. The section over the walkway has been raised but there is still a 40' section of the flume to put back. This is expected to occur next week. Zorich asked if the electric to the exit has been installed yet.
- 4.6.3. JDA Lamprey collection protocols. Still working on the hoist; installation now scheduled for May. No protocol in place yet, but FPOM would like to have an opportunity to look at the hoist in operation to help craft those protocols. Still need to work out: (1) All parties need to agree on time of day and frequency of operation. It is anticipated the tribes will be operating the trap daily from July – August and maybe into September. (2) Need to make sure that any and all operators of the jib crane/hoist are properly trained and that appropriate safety requirements are met. (3) How and where should JDAS trap ops be included in the 2013 FPP?

4.7. Avian.

- 4.7.1. NWW bird hazing update. No approval as of yet; while NWW was prepared to move forward, USDA was not. APHIS was not prepared to do the work as written in the SOW. NWW is having concerns about whether this contractor is the best way to accomplish hazing. Fredricks noted that this issue may have to be elevated. Dugger noted they still have hazing occurring but including lethal take would be helpful. USFWS issued a permit for a certain number of gulls taken in the mid Columbia. A portion of those would need to be transferred to NWW to keep the total numbers the same. Zorich suggested going with boat hazing, even though it is expensive it is effective. Fredricks said lethal take is another tool that is needed. Fredricks suggested forming an Avian Predation Task Group. **ACTION: Setter/Fone will help create a Task Group and have a kick-off meeting in June.**
- 4.7.2. Lethal take of gulls for tern management. Lorz said this option is no longer available.

4.8. BPA updates. Bettin provided a handout.

4.9. Critical Spare parts lists. (Takabayashi) Bushing bearing and spare transformer study update. Takabayashi provided a summary of the transformer spares study. FPOM was amazed the Projects were not required to provide the information to BPA for purchasing of the spare parts. **FPOM agrees this is a high priority and should be followed up.**

5. Coordination/Notification forms (need concurrence).

- 5.1. 13TDA04 BPA RAS testing. **Approved.**
- 5.2. 13MCN06 Oregon shore adult fishway entrance weirs. **Approved.**
- 5.3. 13IHR08 – 3D cam replacement and MU cooler inspection testing. **Approved.**
- 5.4. 13LGS01A LGS spillway gate / stop log / diesel generator testing. **Approved.**
- 5.5. 13LWG03 LWG powerhouse roof repair. **FPOM is ok with the 24 hour operation.**

6. BON JMF separator bar monitoring contract.

- 6.1.** Condition sub-sampling v regular SMP index sampling. Mackey provided handouts. She explained that NWP will not be including the sub-sampling in the proposed SOW for the separator bar monitoring contract. Lorz asked if a modification could be made to the contract with FPC. Mackey said that is a BPA contract and she welcomes the effort. Bettin said that was attempted but was not successful. Chockley asked why. Bettin said FPC was not supportive of the change. Chockley suggested we try again. **ACTION: Lorz said they will take it to FPAC and Bettin will broach the subject again with BPA contracting.** Martinson noted there is no additional cost to continuing the sub-sampling as currently done. Fredricks made it clear that the Action Agencies are required to monitor fish condition through the bypass. Klatte and Mackey acknowledged that but also expressed concerns about a third party handling fish along with PSMFC.
- 6.2.** Kelt video counting. Stansell provided an update. He said his understanding was to get the system out there to monitor for the kelt trigger. FFU was not instructed to continue the kelt counting after the trigger was met so they removed the equipment and prepared it for lamprey counting use. NOAA asked if this would be implemented in the same way next year. Stansell says that what he recommends. They have figured out how to compress 24 hours into about 3 hours of reviewing time. If the motion sensor works, then the time for review is reduced down to minutes. Martinson added that the video allowed for the trigger to be met sooner than the visual counts. **ACTION: NWP will develop a proposal for kelt monitoring from 1 March through 10 April. They will bring this back to FPOM for further discussion and development.**

7. Fish Passage Plan: Final 2013 FPP has been posted to the website: <http://www.nwd-wc.usace.army.mil/tmt/documents/fpp/2013/index.html>.

7.1. 2014 change forms.

7.1.1. 14BON001 Lorz provided the change form and supporting documentation. Wright asked if steps 1-3 could just be accepted now. Lorz and Fredricks said this is a package deal. Lorz said going to BOP at PH1 is a contentious issue with some in the Region and they feel the spill is an acceptable trade-off. Baus and Wright would like to avoid the TMT SOR process but FPOM isn't quite willing to accommodate that request by parsing out sections of the change form. There is some fear of kicking the trigger issue down the road and this needs to be dealt with sooner rather than later. **CRITFC, NOAA, USFWS support the change form. IDFG was absent. ODFW supported it at the last meeting, but no rep was at the May FPOM. BPA and USACE need to take this back to their chain of command.** Aside from the fact that this couldn't be accepted today, Bettin suggested this is a good time to present this. Fredricks said this is probably the more documented decision FPOM has made and it will likely be included in the 2014 BiOp. **ACTION: FPOM will take the change form to their respective agencies and bring their a position back to the June FPOM meeting.**

7.1.2. 14TDA001 Wicket gate opening. **Approved with the change to 15 minutes.**

7.1.3. 14JDA001 Wicket gate opening. **Approved.**

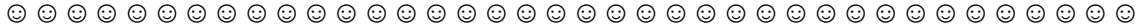
7.1.4. 14LMN001 Unit 1 change in priority. **FPOM concurs.**

8. Task Group Updates.

8.1. BON unit operating range (Lorz). Team members include Baus, Benner, Bettin, Chockley, Conder, Cooper, Fredricks, Hausmann, Hevlin, Lorz, Mackey, Meyer, Tackley, Rerecich, Wills.

- 8.2. BON VBS task group. (Hausmann). Team members include Baus, Bettin, Fredricks, Hausmann, Lorz, Mackey, Rerecich, and Wills. Fredricks said the main purpose it to better clarify the FPP criteria for re-installing screens and how to keep screens in throughout the year.
 - 8.2.1. VBS backer screen required bus line clearance.
 - 8.2.2. Hausmann said he has taken a closer look at the reinstallation criteria. In the field, the actually reinstallation was close to the recommended installation criteria.
 - 8.2.3. **ACTION:** Fredricks and Hausmann will write up a change form to update the language for when screens will be re-installed. **STATUS:** Change form submitted on 8 May. **Approved.** Fredricks would like the final re-installation decision be left up to the Project. This decision would be based on some data and professional judgment.
 - 8.3. Sturgeon task group (Van der Leeuw or Hausmann) **ACTION:** The task group will write up the change form and submit at the May FPOM. **STATUS:** Hausman reported “Bonneville doesn't allow wicket gates to be opened when tail logs are not in so we have no protocol to speak of other than that.” Cordie and Zyndol submitted FPP change forms. **Change forms approved.**
 - 8.4. AFF mods (Rerecich).
 - 8.5. Fish counting task group (Setter). Team members include Fredricks, Klatte, Mackey, Setter, Tackley, and Wills.
9. Calendar items/ next FPOM agenda items. (Check the CY13 on the website)
 - 9.1. June FPOM meeting will be held in the BON Auditorium.

Memorandums of Coordination



Coordination Title: 13TDA04 BPA RAS testing

COORDINATION DATE- 16 Apr 2013

PROJECT- The Dalles Lock and Dam

RESPONSE DATE- 09 May 2013 (FPOM)

Description of the problem- Unit 18 is a fish priority unit due to its open sluiceways. BPA is requesting units 17-22 out of service for DC RAS testing on July 18 and July 22 for approximately 10 hours each. Unit 16 will be the priority unit. Approximately 1 hour will be needed to close and open unit 16 chaingates each time.

Type of outage required- Unit 18 and associated sluiceways.

Impact on facility operation- Change to unit 16 as priority operating unit with associated chaingates open.

Length of time for repairs- 10 hours each day

Expected impacts on fish passage- No impact is expected because all units east of unit 16 will be off line, hence no turbine entrainment. Unit 16 will have its chaingates open for sluiceway passage.

Comments from agencies

Final results



COORDINATION TITLE - 13 MCN 06 North Entrance Weirs, McNary Dam Oregon Shore Fish Ladder

COORDINATION DATE - 6 May 2013

PROJECT - McNary Lock and Dam

RESPONSE DATE - 9 May 2013

Description of the problem: The north entrance weirs on the Oregon Shore Fish Ladder (NFEW2 and NFEW3) have been increasingly out of calibration in recent weeks, probably due to partial failure of the metal wheels that guide the weirs in their slots. The following shows the ladder check dates and associated problems:

- 5/1: NFEW3 slack approx by 1 foot; NFEW2 OK
- 4/28: NFEW2, slight slack - possibly out of criteria
- 4/26: Slack not documented – different inspector
- 4/24: NFEW2, much slack; NFEW3 OK
- 4/21: NFEW2 slack; NFEW3 OK
- 4/19: Slack not documented– different inspector
- 4/17: NFEW2, much slack; NFEW3, light slack
- 4/14: No slack noted.
- 4/12: Slack not documented– different inspector
- 4/10: No slack
- 4/8: NFEW3 - some slack?
- 4/5: Slack not documented– different inspector
- 4/3 NFEW2 and 3: very light slack
- 3/31: NFEW2 slack
- 3/29: No slack noted
- 3/21 to 3/28: Slack not documented
- 3/17: NFEW: Slight slack: First time we noticed and documented it.

The Assistant Biologist started noticing problems on occasion since 3/17 and more frequently since April 17.

The slack condition of the cables has caused the following problems:

1. The weirs could jam in place, and at low tailwater we could have a worse passage problem;
2. During inspections, we have found slack in the cables that suspend the weirs. Right now, the ladder is probably out of criteria, and not by just a few inches. When NFEW2 has slack it is 2 to 4 links slacked into the flow with the links being 6 to 8 inches long. This would be more than an inch or two out of criteria - more like about a foot or more. On May 1 the LED dial read 8.5 feet but we estimated the weir to be at 7.5 feet based on the slack and links' length.
3. The weirs are to be lowered at night for lamprey passage from 6/15/2013 to 9/30/2013. If they continue to hang up, that defeats the purpose of the lowering.

With slack cables, there is no way to know accurately whether or not the weirs are in calibration, or how far they are out of calibration, as they are under swift water, so you can't just drop a tape and measure them. The problem only occurred in the past few weeks, which is why we didn't do the job during the winter maintenance period.

Type of outage required: The job takes time but the actual swap would be very short. It will likely take less than 1 hour to replace each weir:

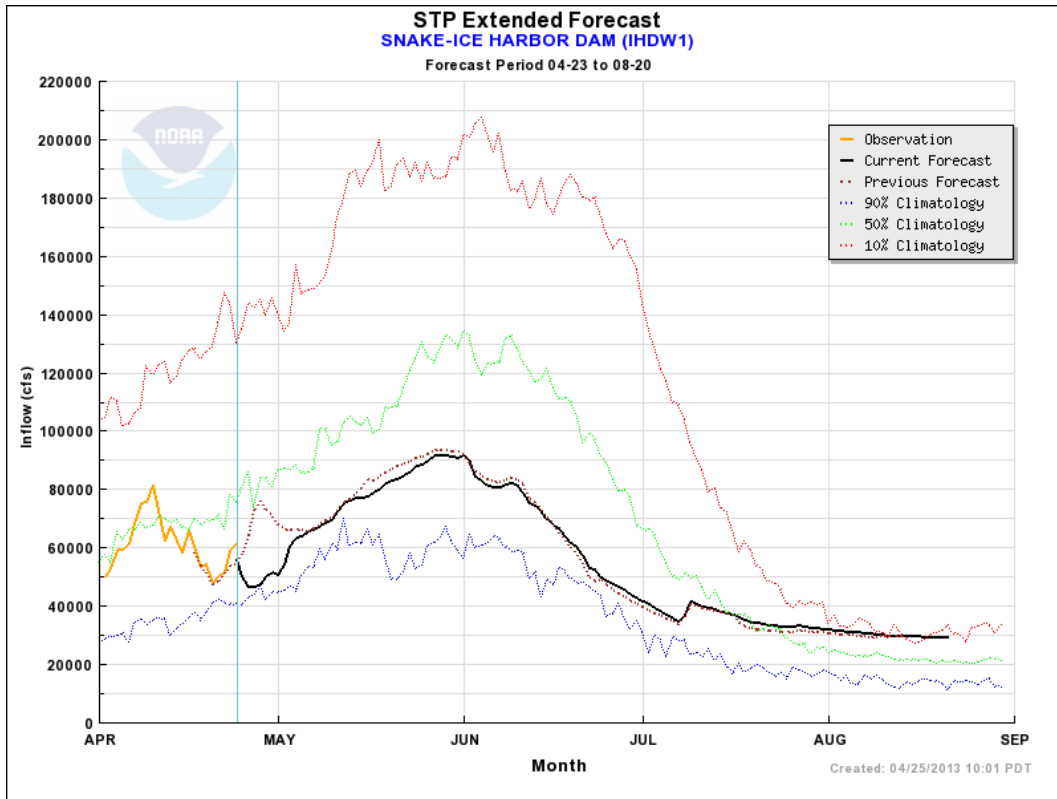
The procedure:

1. Lowering Weir 1, in order to reduce back pressure;
2. Pull out one old weir;
3. Replacing it with a repaired weir that has the new UHMW rollers on it;
4. Raise Weir 1 again.

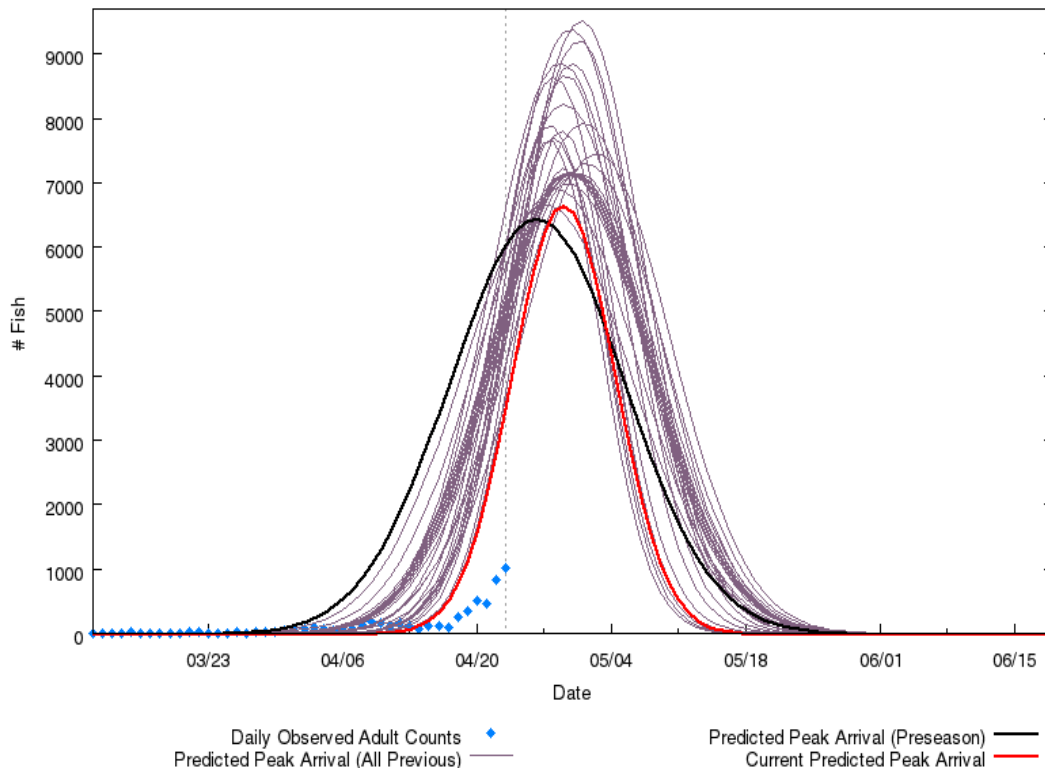
We can probably do this without shutting down the fish pumps, as entrance weirs are on rollers for the very reason that they are designed to operate against a pressure head. They will move whether or not pressure is against them. We need to do this twice: Once for NFEW2, and once for NFEW3, probably a day or two later, as we need to put the new rollers on the pulled weir. This means being out of criteria for up to two hours total, vs. being way out of criteria for days on end during a heavy fish run. NFEW1 is normally held in a raised position and its replacement can wait until the winter maintenance season.

The project believes that this can be accomplished without a fish pump outage and without reducing the ladder flow. However, we do want the authority to shut down one or both fish pumps if the flows are too strong against the problem weirs. Potential adverse impacts to fish would be the removal and immediate replacement of each of the 2 weirs, plus reduced flows if we need to shut down one or both fish pumps for up to an hour per weir. Impacts to fish could be reduced by starting the project as soon as crews and repair parts are available, and by conducting the work between 1400 and 1500, when diel charts show fish migration is at its lowest level of the daylight hours.

Impact on facility operation: Minimal. Studies by the University of Idaho indicate that the North Entrance only passes about 11% of the adult fish that enter the Oregon ladder. The rest pass through the south entrance and the powerhouse floating weirs. We would just be tying up a crane and crew for the operation. Fish pumps would hopefully not be affected, and ladder flow



Predicted Adult Spring Chinook Arrival Peak and Run Size at Bonneville Dam
 Peak Arrival and Run Size Prediction on 4/23/2013
 Peak Arrival Day: 4/28/2013 (118) Run Size: 89021 StDev: 5.33333333333333



place and then remove the spillway stop logs. The second contract was the purchase of new spillway stop logs, the commissioning also requires taking one spillway gate out of service and testing functionality and fit. Some FPOM discussions have taken place under a previous Coordination Request where final action has not yet been taken (for details see 13 LGS 01 Spillway Stop Log Testing).

Type of outage required: An operational change is being requested for (2) one-day periods at a time.

During peak seasonal flow of the Snake River, when spillway bays are passing water, a differential movement of gates is being requested. The spillway diesel generator will move one gate up and the adjacent gate down. Then after 5 minutes return both gates to their appropriate position. The process will be repeated until all gates have moved up and down a single stop once for the Dam Safety program. This operation should take 1 hour or less.

During the commissioning activities for the Crane and stop log testing a one day outage of one spillway Bay to place and remove stop logs. However, testing may extend into a second day, which is why an outage of 2 separate days is being requested.

Impact on facility operation: Transferring power to the diesel generator will be the biggest impact to the facility. Operating the navigation lock during this time will not be recommended. This outage is only expected to be 1 hour or less. Timing the test for when no boats are coming would mitigate this issue. Differential adjustment of the spillway gates will not impact the total water passing through the spillway during the Dam Safety inspection activities.

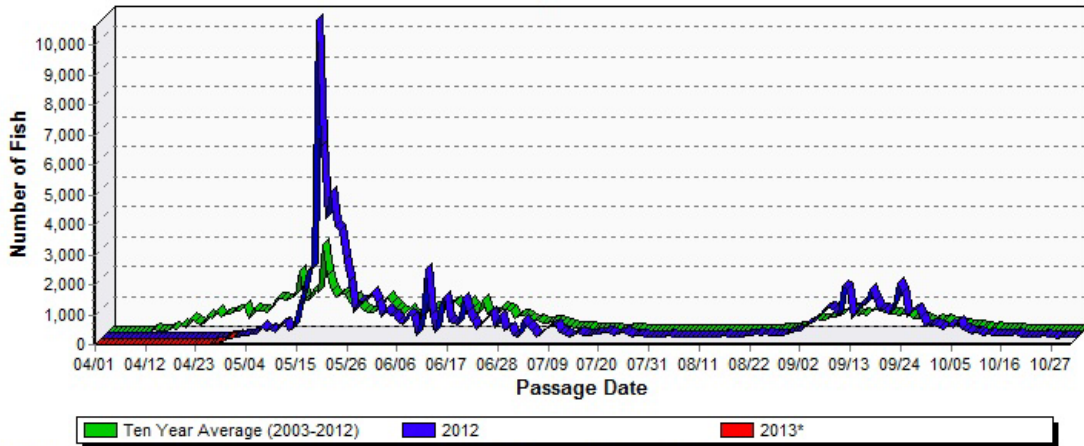
During the commissioning activities for the Crane and stop log testing a one day outage of one spillway bay to place and remove stop logs will be required. Since the total flow through the project is projected to be less than 80kcfs one or more spillway bays would not be used to match the required spill pattern, therefore the test would not impact spillway functionality for the published FPP spill pattern.

Length of time for repairs: Two full days is the estimate to complete the work, the requested time frame would need to occur during the week of June 17-21, daily outages only, spillway bays would be returned to normal operations at the end of each day. The requested time frame would give the project the needed flexibility to conduct these operations and allow for unplanned slippages or problems encountered during the testing.

Expected impacts on fish passage: Little to no impact on fish passage is expected. Expected total Snake River river flows in the June 17 – 21 timeframe is approximately 47 – 54 kcfs. In low crest TSW configuration, the FPP spill pattern calls for TSW operation with 1 or 2 stops in spillbays 2 and 8. In high crest TSW configuration, 1 to 5 total stops would be needed. Under these conditions non-TSW bay configuration would range from 1 stop each in bays 1 and 8; to 1 stop each in bays 2, 4 and 6 plus 2 stops in bay 8 (with 2 unit operation and 31% spill). Given these conditions, transferring 1 or 2 stops to an adjacent bay, if necessary, produces very little effect on fish passage since TSW operation dominates tailrace conditions.

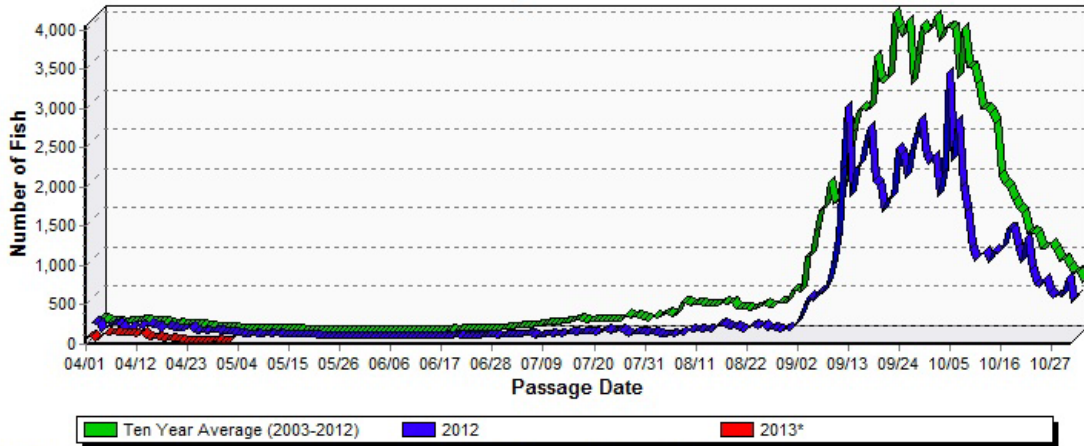
As can be seen on the charts below, The planned June 17 – 21 timeframe is after the peak of the spring Chinook run, prior to steelhead run arrival in late August and just before the majority sockeye salmon begin to arrive. Adult impacts can be minimized by conducting work between 1000 and 1700 hours when adult fish are the least active.

Chinook Adult Passage at Little Goose Dam



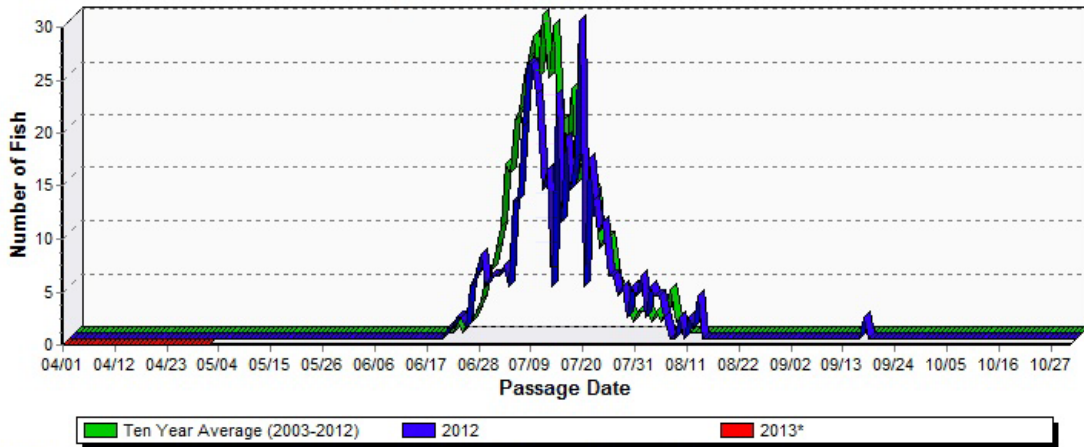
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Graph design last updated on 03/13/13

Steelhead Passage at Little Goose Dam



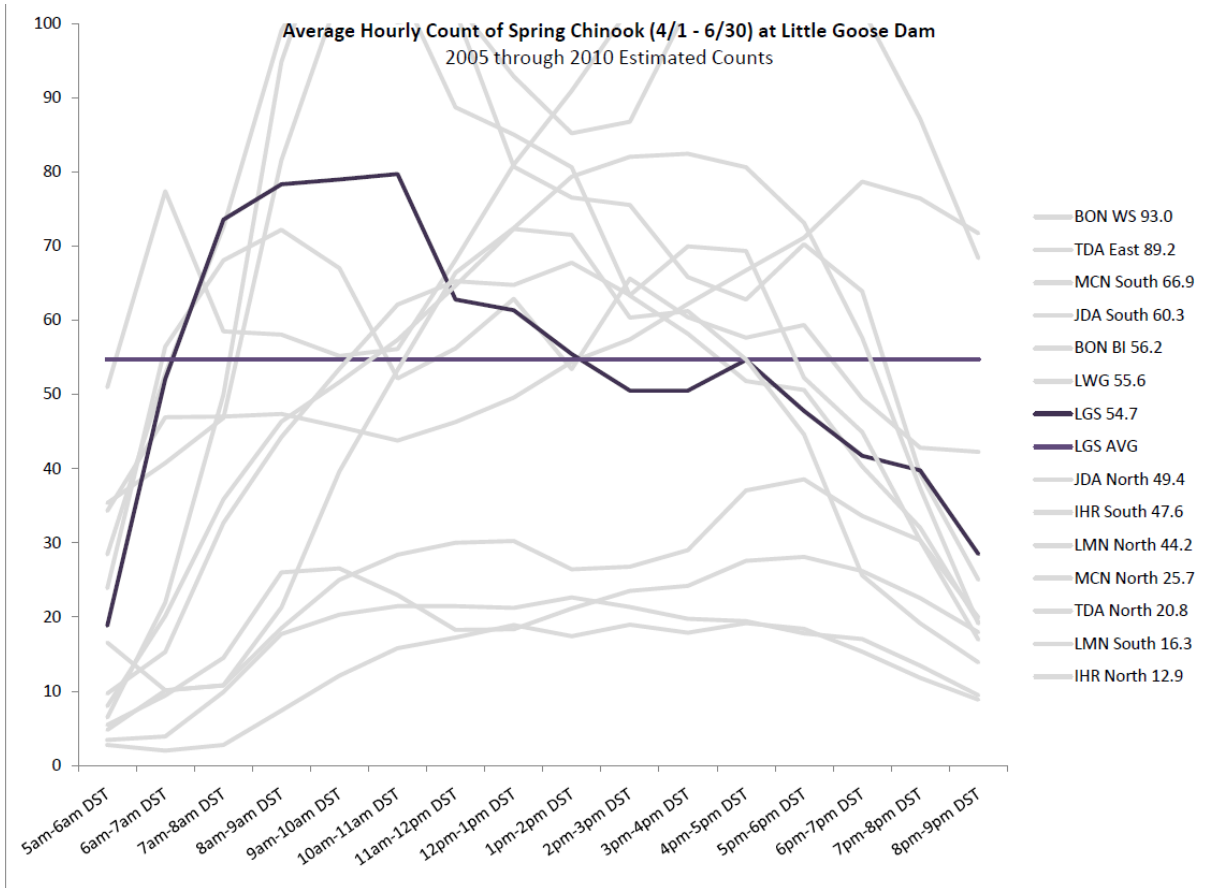
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Graph design last updated on 03/13/13

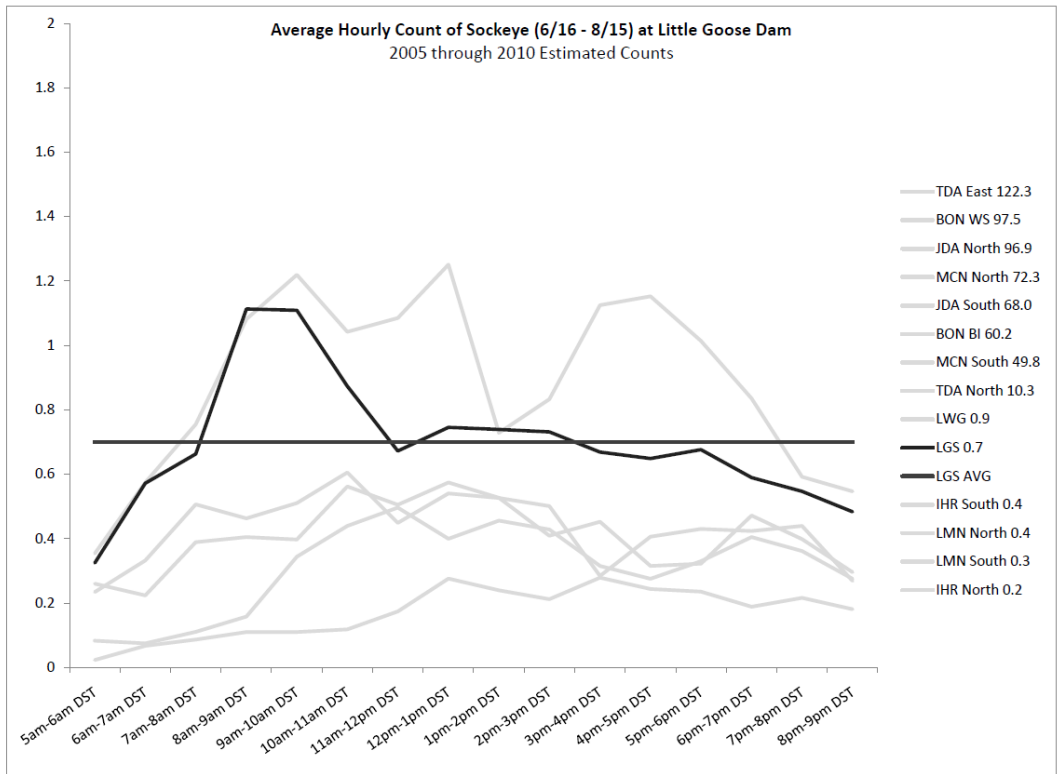
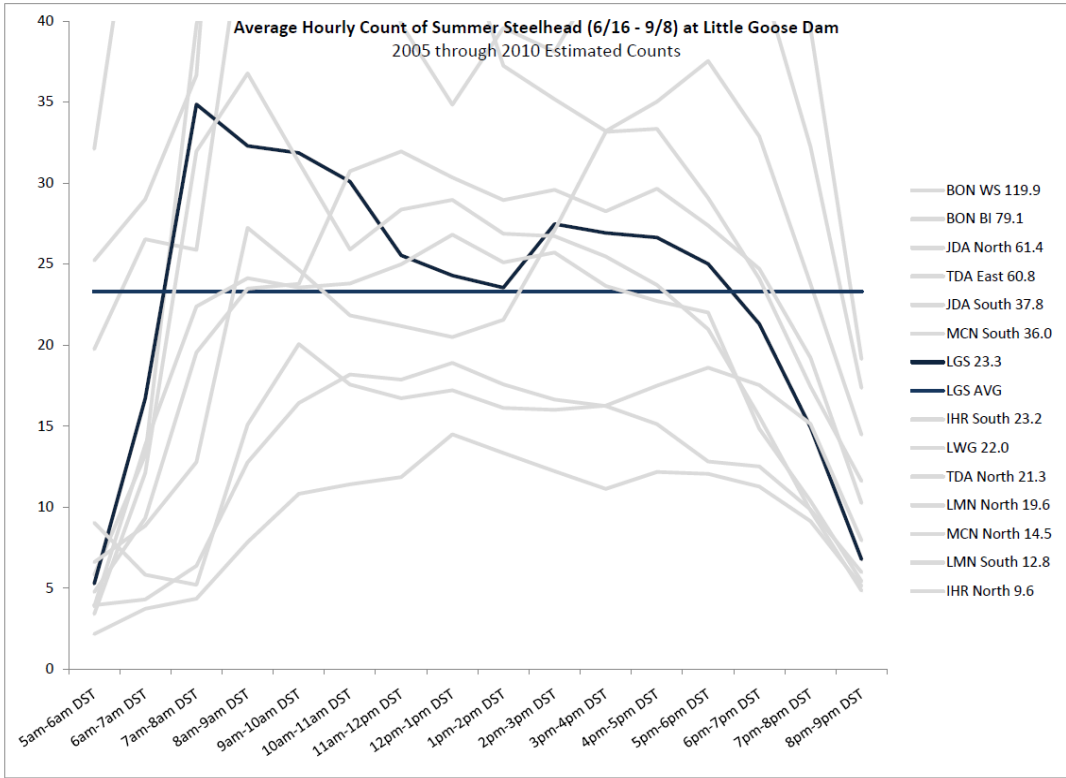
Sockeye Passage at Little Goose Dam



Graph designed by the Fish Passage Center - Copyright © 2013 Fish Passage Center. All rights reserved.
Graph design last updated on 03/13/13

Diel Adult Fish Passage at Little Goose: 2005 – 2010 diel adult passage data indicate that peak count hours for Spring Chinook, Summer Steelhead and Sockeye are from 0700 to 1000 hours. Scheduling tests after 1000 hours will minimize adult passage impacts yet allow crane work to take place in daylight conditions. Night time tests would create additional safety hazards to the crane and rigging crew and impact night time juvenile fish passage over the TSW and spillway. See charts below for additional hourly adult passage details.





Comments from agencies

Final results:



COORDINATION TITLE- 13LWG03 Powerhouse Roof Repair

COORDINATION DATE- March 26, 2013 / [May 6, 2013](#)

PROJECT- Lower Granite Lock and Dam

RESPONSE DATE- March 29, 2013 / [May 9, 2013](#)

Description of the problem- [See the Final Results section near the end of this document for powerhouse outage schedule changes.](#)

Issues with the Existing Powerhouse Roof: The existing roof on the Lower Granite powerhouse consists of polyurethane foam insulation (PUF) that was spray-applied directly to the corrugated structural steel roof deck. It was installed in 1995 as rehabilitation to the original powerhouse roof which was also a PUF system. The foam insulation is waterproofed with a two-coat application of spray-applied polyurethane roofing membrane.

The current roofing system has been exhibiting widespread blistering of the waterproof polyurethane membrane for several years and, thus, has been the subject of concern for water intrusion into the foam insulation. Roof leakage has also been reported by Lower Granite Project personnel up to 20 feet from the roof perimeter, primarily along the downstream parapet wall of the powerhouse. A roof moisture survey was conducted by an independent firm to determine the extent of water penetration into foam insulation and its potential to cause roofing system failure. Due to limited funding, the survey was conducted only on the Erection Bay, which is the area of the powerhouse roof where the worst membrane blistering has occurred. Here, the moisture survey identified varied but limited amounts of moisture within the foam insulation. The moisture detected is primarily located in the top portion of the foam, which is generally an indicator of deterioration of the waterproof coating. As noted in the moisture survey report, the coating problems appear to be the result of “age, normal deterioration, pin-holing, punctures and de-lamination of the coating from the foam insulation.”

The moisture survey report notes that the concentration of moisture found in the upper areas of the foam insulation ranges from a low of slightly above the ambient (or background) moisture level to a moderate moisture content which is still far below a moisture saturation level and levels of moisture which become visible to the human eye.

The moisture survey report notes that moisture intrusion into the foam insulation, when combined with the current age and limited visible deterioration of the waterproof polyurethane roofing membrane, clearly indicates that the roof system is need of maintenance and repair. The polyurethane coating used on the powerhouse roof has a warrantable life expectancy of up to 10 years. The coating is now going on 17 years in service and, thus, is due for replacement. The moisture survey report also notes that, even though PUF insulation has a closed-cell structure that will resist moisture intrusion to some extent, once moisture enters this type of insulation, an accelerated cycle of roofing system deterioration begins. Furthermore, although the current condition of the roofing system does not present a crisis situation, a plan of action with the goal of accomplishing repairs and rehabilitations within one to two years should nevertheless be put in place as soon as possible. Any delay to making final repairs beyond two years will result in a significant deterioration of the current roofing system and, therein, significantly increase costs associated with its repairs.

Access to the powerhouse roof is required for the roof repair project. Work includes a new moisture survey, removal and replacement of existing roof insulation and membrane that is wet, scoured and otherwise damaged, installation of new PUF insulation, spray application of a new base and top coat for the roofing membrane (applied in four separate spray coatings in order to obtain the membrane manufacturer’s 20 year warranty), sealing open monolith joints in the vertical walls on the upstream and downstream sides of the powerhouse, and installing new hand

rails along the downstream parapet wall of the powerhouse roof in order to facilitate safe worker access for roof maintenance and repair.

Issues with Accessing the Powerhouse Roof Under the Existing Electrical Bus: The 500kV bus located on 5 of the powerhouse bays is approximately 23 feet from the roof.

Approach distances are specified in NFPA 70 E, Table 130.4(C)(a) and Table 130.4(C)(b) and the corresponding voltages to which the qualified person will be exposed. The 19ft figure that was determined to be the safe working distance was and is less restrictive than the OSHA criteria. However the limitations for the use of this as a safe working distance doesn't apply to "unqualified persons" in this case and is only a recommendation from a consensus standard and not a regulation.

OSHA 1910.333(c)(3) states in its entirety;

“1910.333(c)(3)

"Overhead lines." if work is to be performed near overhead lines, the lines shall be deenergized and grounded, or other protective measures shall be provided before work is started. If the lines are to be deenergized, arrangements shall be made with the person or organization that operates or controls the electric circuits involved to deenergize and ground them. If protective measures, such as guarding, isolating, or insulating, are provided, these precautions shall prevent employees from contacting such lines directly with any part of their body or indirectly through conductive materials, tools, or equipment.

Note: The work practices used by qualified persons installing insulating devices on overhead power transmission or distribution lines are covered by 1910.269 of this Part, not by 1910.332 through 1910.335 of this Part. Under paragraph (c)(2) of this section, unqualified persons are prohibited from performing this type of work.

1910.333(c)(3)(i)

"Unqualified persons."

1910.333(c)(3)(i)(A)

When an unqualified person is working in an elevated position near overhead lines, the location shall be such that the person and the longest conductive object he or she may contact cannot come closer to any unguarded, energized overhead line than the following distances:

1910.333(c)(3)(i)(A)(1)

For voltages to ground 50kV or below - 10 feet (305 cm);

1910.333(c)(3)(i)(A)(2)

For voltages to ground over 50kV - 10 feet (305 cm) plus 4 inches (10 cm) for every 10kV over 50kV.”

The calculation of this safe work distance as referenced above is 25ft and is restated in EM 385-1-1, Section 11.F.04. and Table 11-1.

Bottom line is that working around energized overhead electric on the Lower Granite Powerhouse roof would be prohibited.

As for a waiver, it would not be allowed or granted due to 1910.333 being a Federal Statute and would violate federal law. Any assumption of risk by District, Division or Headquarters would violate that and go against Risk Management regulations.

Lower Granite personnel looked into de-energizing a portion of the line, so work could be accomplished in phases. They determined the entire line must be out.

Type of outage required- The contractor will work a 10-hour shift, from 1000 to 2000 hours, on July 15-16, 2013, to conduct the moisture survey. The contractor will work a 10-hour shift, from 1000 to 2000 hours, seven days a week, from August 5 to September 19, 2013, to repair the roof. It will take approximately 1.5 hours to do the safe clearance paperwork and hang clearance tags immediately preceding each day's work shift and another 1.5 hours to do the paperwork and remove the tags immediately after each shift. So a daily powerhouse outage from 0830 to 2130 hours is required to conduct this work. All units will be out except for unit 5 (or unit 6 secondarily), which will run at speed- no-load for house power during the daily outage period. Units will be available to operate from 2130 to 0830 hours.

Doble testing is scheduled for August 12-16 and is already approved under Appendix A of the 2013 Fish Passage Plan (FPP). For the doble testing, all units will be OOS from 0600-1800 hours typically, with units 5 and 6 in service from 1800-0600 hours. The plant outage would extend until 2130 hours for the roof repair, and then only units 5 and 6 would be available the nights of Aug. 12-15. Unit 5 and 6 operation for passing water and adult fish attraction would be shut off at 0600 hours or earlier for the doble testing.

Impact on facility operation- The project may need to spill in September and spill additional water in August to pass water that is not used for generation because of the daily plant outages. At typical river flows anticipated for that time, total dissolved gas levels are not expected to exceed the gas cap.

Commercial barge and fish barge navigation should not be affected by the anticipated spill levels.

There will not be any power disruptions to the adult and juvenile fish facilities, including the auxiliary water supply (AWS) pumps, adult fish trap, juvenile fish collection gallery, and PIT-tag detection systems.

Dates of impacts/repairs- The polyurethane foam and elastomeric urethane roofing membrane coating have strict application requirements for temperature and humidity. These generally require the work take place during warm summer months with low probability of rainfall.

Contract Requirements:

“Do not apply sprayed polyurethane foam if the roof surface temperature is less than 50 degrees F, higher than 130 degrees F, or is less than 5 degrees F above the dew point. Apply the elastomeric urethane roofing membrane coating over the foam insulation between the ambient temperature ranges of 50 and 100 degrees F. Relative humidity shall be within limits recommended by the sprayed polyurethane foam manufacturer's and the elastomeric urethane coating manufacturer's printed instructions.”

Outage 1, New Moisture Survey: 15 July 2013 – 16 July 2013, 13 hours a day, 0830 – 2130, allows for contractor work 10 hours a day from 1000 – 2000

Outage 2, Roof Repair Work: 5 August 2013 – 19 September 2013, 13 hours a day, 0830 – 2130 pm, allows for contractor work 10 hours a day from 1000 – 2000

Length of time for repairs

Outage 1: 2 days

Outage 2: 6-1/2 weeks

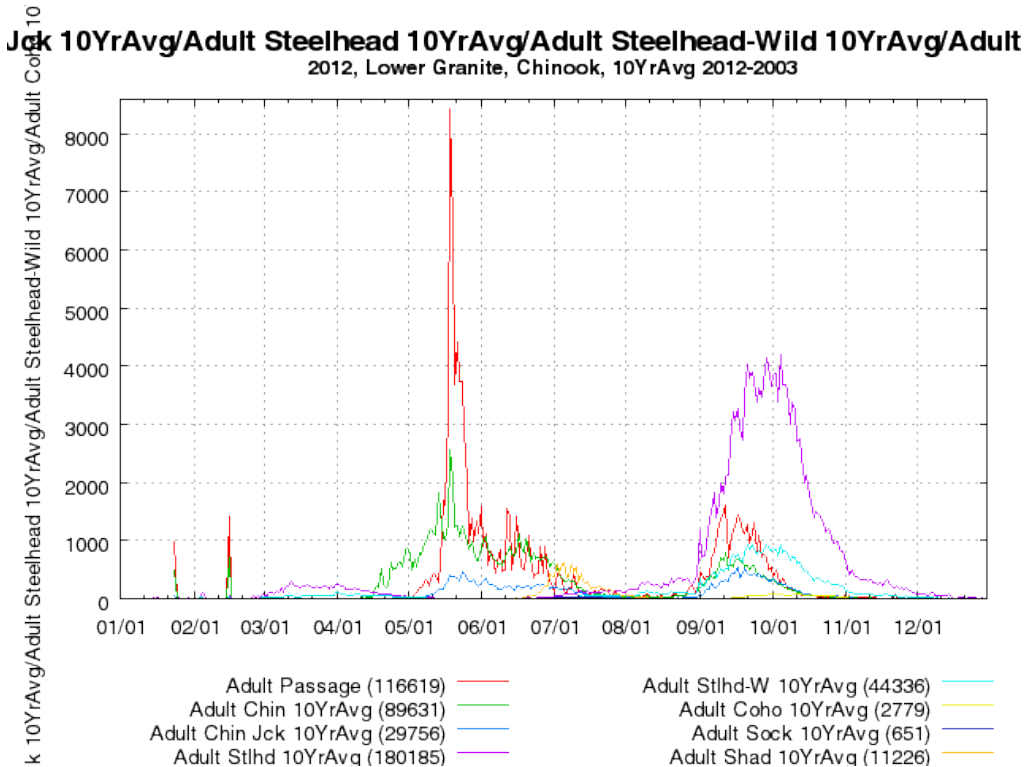
Expected impacts on fish passage- With the powerhouse turbine unit outage from approximately 0830 to 2130 hours each day, excess water may be spilled, potentially putting more fish into the Lower Granite tailrace when water temperatures are up.

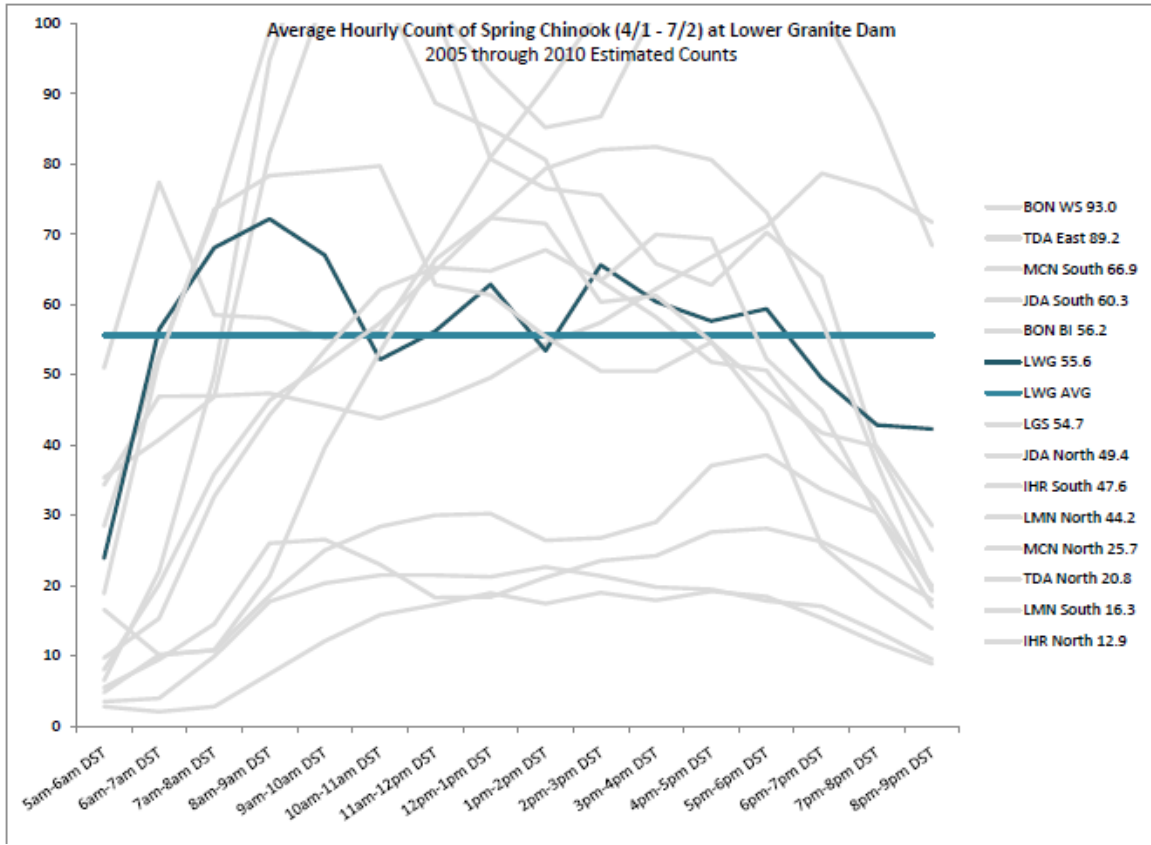
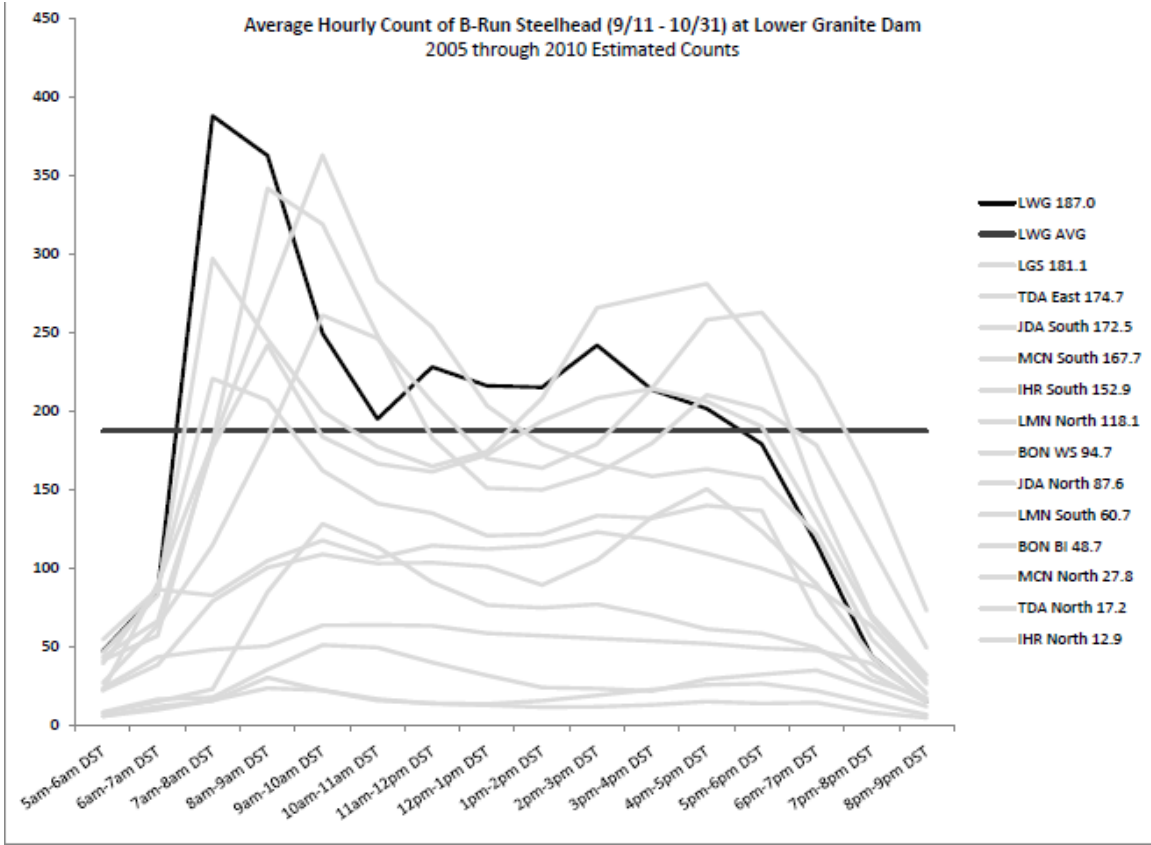
Juvenile fish sample/collection numbers and fish transport numbers would be lower as a result of the daily plant outage.

NOAA's late season fish transport study might be impacted for a week or so.

Turbine units will not be operating to provide adult fish attraction to the fish ladder from 0830 to 2130 hours each day. However, units will be operating from 2130 to 0830 hours each day according to FPP priority. The exception will be during the August 12-16 double testing as mentioned above. The fish ladder and AWS pumps will be operating to meet FPP criteria during the entire construction period.

As shown by the top graph below, adult fish passage counts at the Lower Granite count window are typically low in August and increase in September. The lower two graphs show the average diurnal distribution of "B" run steelhead and fall chinook at Lower Granite, indicating that by 1000 hours the hourly counts are generally decreasing at the count window. The turbine units will be operating till 0830 hours each morning to help attract adult fish to the ladder entrances, where the number of adults passing will probably be decreasing earlier than at the count window.





Comments from agencies

-----Original Message-----

From: Dave Benner [mailto:dbenner@fpc.org]

Sent: Friday, March 29, 2013 12:41 PM

To: Fone, Kenneth R NWW

Subject: RE: FPOM: Lower Granite powerhouse roof repair (UNCLASSIFIED)

Ken-

A few questions:

1. The only survey so far has been conducted at the Erection Bay where the worst blistering has occurred. Depending on what is discovered during the inspection on July 15-16, would it be possible to conduct 1/2 the work this year and 1/2 next year, starting in the most problematic areas. The coordination form states work should be accomplished in 1-2 years. If work only extended through August, looking at adult steelhead and Chinook passage, it would avoid the September period when this outage would potentially have the largest impact on adult passage.
2. If work in September cannot be avoided, can work be accomplished at night- at least during the high adult passage periods. The coordination form does discuss the temperature requirements between 50-100 deg F. I know during Sept nighttime lows do begin to drop off pretty quickly, just wondering if the nighttime option had been fully explored.
3. If all work must be completed this year, extending into Sept and not at night: can the outage be delayed daily from 830-2130 to maybe 1000-2300, especially during period when adult numbers increase or have this happen if we begin to see an impact on daily passage. Looking at your daily passage plots for LGR, having PH attraction for an extra 1.5 hrs in the morning would help.

Thanks for the opportunity to comment. Hope all is well.

Dave Benner

Other comments received were over the phone:

Tom Lorz (CRITFC) asked if the turbine units can be kept running until at least 0900 hours in the morning each day to provide attraction for adult salmonids to the fish ladder entrances.

Gary Fredricks (NOAA Fisheries) recommended that the spill pattern at Lower Granite be re-examined to ensure that there is flow loaded on the side bays for optimal attraction of adult salmonids to the fish ladders. He asked if the turbine units can be kept running until 0900 or 1000 hours each day to provide attraction for adults to the ladder entrances.

Bill Hevlin (NOAA Fisheries) said that the current Lower Granite spill pattern in the Fish Passage Plan is a "crown" pattern to guide adults along the sides of the spill to the ladder entrances. The adult fish daytime counts need to be monitored for the duration of the roof repair job. If we find that adults are being delayed, perhaps one or two stops can be taken from the middle spill bays and added to the north bays. He recommended that the turbine unit outage be delayed till 0900 or 1000 hours each day if possible.

Rick Kruger (ODFG) brought up the subject of this coordination form at the April 2 FPAC meeting. Paul Wagner (NOAA Fisheries) said that the FPAC group recommended that turbine units be kept running until 0930 or 1000 hours each day, with 1000 hours being the optimal time.

-----Original Message-----

From: Bill Hevlin - NOAA Federal [mailto:bill.hevlin@noaa.gov]
Sent: Monday, April 08, 2013 11:17 AM
To: Fone, Kenneth R NWW
Cc: Bill Hevlin - NOAA Federal
Subject: Re: LGR powerhouse roof repair (UNCLASSIFIED)

Ken,

Thanks for the update. Operating turbine #2 for adult attraction until 9:30 every morning is okay with NOAA. Please revise the MOC and send it to me, and I will reply. Also, include that the COE will monitor adult counts before, during and after the altered operation period to estimate whether numbers of adults appear to be delaying downstream of Granite. Also, as you said, include that during the dates of the double testing the operation will be changed.

I'll be looking for your revised MOC.
thanks again Ken for the good coordination!
Bill Hevlin

On Fri, Apr 5, 2013 at 1:31 PM, Fone, Kenneth R NWW <Kenneth.R.Fone@usace.army.mil> wrote:

Classification: UNCLASSIFIED
Caveats: NONE

Bill,

The feedback I received from FPOM folks for the start time of the daily LGR powerhouse unit outages ranged from 0900 to 1000 hours, with 1000 hours being the optimum time, but with 0930 or 0900 being acceptable to most folks. The PDT for the Lower Granite powerhouse roof repair project will be putting into the contract that the hours available for the roofing work will from 1100 to 2130 hours each day, so the actual powerhouse unit outage will be from 0930 to 2300 hours. As mentioned in the MOC, the double testing at LGR will be occurring Aug. 12-16, starting at 0600 hours each day. This extends the outage from 0600 to 2300 hours on Aug. 12-16. The double testing and 0600 start of the testing is in Appendix A of the FPP.

I'll be updating the MOC with the comments I received and the final results, which I'll also summarize at the FPOM meeting as an update.

Thanks,
Ken

Final results

Comments received were discussed with the Lower Granite roof repair PDT and taken into consideration to finalize the turbine unit outage schedule and daily work window for the contractor. The unit outage schedule will be as follows:

OUTAGE 1: Moisture survey, 15 July 2013 and 16 July 2013 (2 days), 0930 - 2300 hours

OUTAGE 2: Roof repair work:

~~0510~~ August 2013 - 11 August 2013, 0930 to 2300 hours

12 August 2013 at 0600 hours to 16 August 2013 at 2300 hours, ~~0600 to 2300~~ 24 hours per day between those dates (0600 to 1800 hours already approved for dole testing)

17 August 2013 - ~~1922~~ September 2013, 0930 to 2300 hours

Lower Granite Project received notification from BPA on 2 May 2013, about a line outage conflict at the substation the week of 3-9 August 2013. BPA needs the Lower Granite line available that week to keep the substation operable while they perform spacer replacement on another line. The scheduled start and end dates for the roof repair will need to occur 5 days later. To mitigate for that, the PDT is proposing a 24-hour per day outage during the August 12-16 period, which would move up the completion date from August 24 to August 22.

When the powerhouse is in operation, turbine units will follow Fish Passage Plan operating priority.

The work shift available to the contractor will be 10.5 hours long (includes 0.5 hour lunch break) during the 1100 to 2130 hours time frame, with the remainder of the time needed to prepare and place the safe clearance tags and remove the tags each day. Project personnel have determined that the line feed for station service will need to be switched twice each day, at the start and end of the daily powerhouse unit outage. This will result in the AWS pumps being out of service for approximately 5 minutes at 0930 hours and again at 2300 hours.

For the duration of the roof repair dates, adult salmonid numbers passing the count window will be monitored. If the data indicates that adult fish passage is being delayed, in-season coordination will occur with the regional agencies to change the spill pattern to help with adult fish attraction to the ladder entrances.

Lower Granite project will coordinate with RCC and BPA on water storage operations in the Lower Granite pool that may be needed to reduce the extra water that would otherwise be spilled during the powerhouse outage, with the goal of keeping dissolved gas levels below the gas cap.

Thank you,

Ken Fone
509-527-7140

FPP Change Forms



Change Request Number: 14TDA001 10 minute wicket gate test opening

Date: 04/30/2013

Proposed by: Bob Cordie

Location of Change: The Dalles Dam

Proposed Change/Add:

5.8. Turbine Unit Operation and Maintenance

Wicket gate opening for functional testing on a watered up unit will be no more than 10 minutes total open time.

Reason for Change: During turbine maintenance, the wicket gates require functional testing to put the unit back in service. We restricted this to 5 minute open time in the past to prevent sturgeon in the draft tube from entering the scroll case. This was a result of a history of sturgeon entering the scroll case when wickets were left open.

With the new digital governors on units, the wicket functional testing requires a few more minutes. Therefore we propose a 10 minute total open time. There is no data suggesting a hard limit to the amount of time wickets can be opened. Five minutes was selected as a project SOP to meet both maintenance and fish needs. The intent was to assure they weren't left open for hours or days. Ten minutes is expected to give the same results.

This is a project specific requirement and will likely not apply at other projects with differing sturgeon challenges.

Comments from others:

Record of Final Action:



Change Request Number: 14JDA001 15 minute wicket gate test opening

Date: 04/30/2013

Proposed by: Miro Zyndol

Location of Change: John Day Dam

Proposed Change/Add:

5.4. Turbine Unit Operation and Maintenance

Wicket gate opening for functional testing on a watered up unit will be no more than 15 minutes total open time.

Reason for Change: Consistency with TDA. During turbine maintenance, the wicket gates require functional testing to put the unit back in service. We restricted this to 5 minute open time in the past to prevent sturgeon in the draft tube from entering the scroll case. This was a result of a history of sturgeon entering the scroll case when wickets were left open.

With the new digital governors on units, the wicket functional testing requires a few more minutes. Therefore we propose a 15 minute total open time. There is no data suggesting a hard limit to the amount of time wickets can be opened. Five minutes was selected as a project SOP to meet both maintenance and fish needs. The intent was to assure they weren't left open for hours or days. 15 minutes is expected to give the same results.

This is a project specific requirement and will likely not apply at other projects with differing sturgeon challenges.

Comments from others:

Record of Final Action:



Change Request Number & Title: 14LMN001 – Unit 1 Priority Change

Date Submitted: May 6, 2013

Project: Lower Monumental Dam

Requester Name, Agency: Brian Vorheis, Chief of Maintenance, Lower Monumental Dam

Location of Change - FPP Project and Section:

FPP13 LMN 4.1. The change would be effective immediately.

Proposed Changes (in track changes to existing section):

4. Turbine Unit Operation and Maintenance

4.1. Turbine Unit Operation.

When in operation, turbine units will be operated to enhance adult and juvenile fish passage from March 1 through November 30. During this time period turbine units will be operated as needed to meet generation requirements in the priority order shown in **Table LMN-5**. Unit operating priority may be coordinated differently to allow for fish research, construction, or project maintenance activities. If a turbine unit is taken out of service for maintenance or repair, the next unit on the priority list shall be operated. Flows listed in Table LMN-5 are based upon daily average flows. Also see **Section 2.1, Spill Management**.

Turbine Unit 1 was the Fish Priority unit prior to the failure of blade linkages. Temporary repairs included blades being welded in fixed positions. Operating turbine unit 1 improves juvenile fish passage by eliminating the eddy at the fish loading dock. Turbine unit 1 operation is also preferred as operation attracts adult fish to the North fish ladder. Since this turbine unit has fixed blades and a narrow operation window, starts and stops can cause excessive wear and tear. Unit 1 run priority is last on, first off for all flow conditions until blade link pin repairs are completed in 2015 or 2016. Turbine unit 1 should be turned on and left on for extended periods to minimize starting and stopping the unit. The operation of turbine unit 1 in first priority position should be initiated when flows are in an increasing trend, and flows are over 70kcf. Turbine unit 1 may be turned off at the power plant operator's discretion, when the flows are between 55kcf-70kcf.

Table LMN-1. Turbine Unit Operating Priority for Lower Monumental Dam.

Season	River Flow	Spill Rate	Unit Priority
Fish Passage Season March 1 – November 30	<70 kcf	Bulk Spill Gas Cap	2, 3, 4, 5, 6 then 1
	>70 kcf	Bulk Spill Gas Cap	1*, 2, 3, 4, 5, then 6
	Any River Flow	<u>Any Spill Level, including No Spill</u>	2, 3, 4, 5, 6 then 1**
December 1 – end of February	Any River Flow	Any Spill Level, including No Spill	Any Order

* If U1 is OOS, run U2.

** If no spill is occurring, U1 may be operated at any priority level at the discretion of project personnel. **NOTE:** U1 has fixed-pitch blades and can operate only at about 130 megawatts.

This unit priority sequence will remain in effect until unit 1 blade link pin repairs are completed in 2015 or 2016.

Justification for Change:

Main Unit 1 has fixed turbine blades due to the failed BLH link pins. With the blades not being able to rotate the blade seals are not exercised so after prolonged sitting in one position coupled with the pressure created on the blades from the water when the unit is running increases the probability of leaking oil from the blade seals. This probability is minimized when the unit is not run due to the removal of the water pressure from the blades. The unit is scheduled to be repaired in 2015.

