AGENDA (Draft)

Fish Passage O&M Coordination (FPOM) Team
RDP Summit Room (10th Floor)
January 10, 2008 (0900-1230)
Call in # 503-808-5198**, passcode** 3295

1. Review/Approve Agenda and Minutes (B. Klatte)

2. Action Items (B. Klatte)

2.1 [Oct 07] J. Adams requested some discussion on the Water Management Plan so altered operations for navigation can occur quickly. **ACTION:** B. Hevlin, J. Bailey and J. Adams will discuss appropriate language for inclusion in the FPP.

2.2 [Aug 07] Draft tube grizzly drains. **ACTION:** BON and TDA to work on a new grizzly design.

2.3 [Nov 07] JDA FOG testing procedure. Fredricks would like to see justification for the operation put n the FPP change form. JDA plans on testing the procedure the week of 25 November. **ACTION:** B. Cordie will incorporate test results in an FPP change request form.

2.4 [Oct 07] Dam Angling and Hazing program plans. **ACTION:** D. Wills will send lethal take information to Klatte, Cordie and Mackey. ***STATUS:*** *To be discussed under Agenda Item # 8*

2.5 [Nov 07] JDA U16. **ACTION:** B. Cordie to provide an updated status report in January. ***STATUS:*** *To be discussed under Agenda Item #10.*

2.6 [long time ago] Switch Gate Seal at BON: **ACTION**: TDA and BON will collaborate on new, possibly air bladder, seals. B. Hausmann needs more information regarding the continuous flushing flow request from NOAA Fisheries. ***STATUS:*** *Bonneville believes they have found a way to reduce leakage around the nose of the gate. They will be pursuing this during winter maintenance 07/08.*

2.7 [Nov 07] TDA stub weir removal. **ACTION:** D. Clugston to provide cost estimates and the Schlenker analysis. ***STATUS:*** *May be on hold while the impacts to lamprey are investigated.*

2.8 [Nov 07] BON VBS cleaning criteria. **ACTION:** D. Schwartz to send out criteria and schedule for FPOM review by the January meeting. ***STATUS:*** *Dennis will provide everything at the FPP review meeting on 25 January.*

2.9 [Nov 07] Pikeminnow removal at Corps collection facilities. **ACTION:** J. Bailey and T. Mackey will collect info on pikeminnow collection at the projects and discuss with Project bios. B. Klatte will look into the legal issues. ***STATUS:*** *The Corps will provide an update on status.*

2.10 [Nov 07] Pinniped sightings at Bonneville. **ACTION:** FFU will keep an eye on the pinniped numbers and update FPOM at the December meeting. B. Klatte will find the contract information and the proposed hazing start date. ***STATUS:*** *The contract runs from 1 February to 30 September 2008. The states have requested permission to haze Steller sea lions in December. They began the week of 10 December.*

2.11 [Nov 07] Video counts and the web. **ACTION:** J. Dalen will look into including additional information on the website. ***STATUS:*** *Notes are posted at https://www.nwp.usace.army.mil/op/fishdata/home.asp.*

2.12 [Nov 07] BON spillway erosion repairs and survival information. **ACTION:** D. Schwartz will send out a packet of information prior to Thanksgiving. ***STATUS:*** *Information sent out on 20 November.*

2.13 [Nov 07] TIE crane and TIES. **ACTION:** B. Klatte will head up an ad-hoc committee to put together a fact sheet on the TIES. The committee will consider the impacts of the B2CC, BGS, etc on the effectiveness of the TIES. Committee members include Klatte, Schwartz, Bettin, Fredricks, Wills and Mackey. First meeting is 10 January immediately following FPOM. ***STATUS****: TIE crane funding was not approved by Capital Work Group and it has been determined by NWP that it is an expense so we will be prioritizing FY08 budget to determine where TIES Crane repair falls. Regardless of repair of crane, TIES will be installed in Spring 2009.*

2.14 [Nov 07] FPP Comments. **ACTION:** T. Mackey to send NWP drafts to RCC NLT 30 November. ***STATUS:*** *NWP sections sent to S. Boyd on 28 November. The draft will be posted on the TMT website. S. Boyd sent out the link in mid- December.*

2.15 [Nov 07] FPP Review meeting. **ACTION:** B. Cordie to look into reserving the Westrick room for 25 January. ***STATUS:*** *Room reserved for 25 January.*

2.16 Discussion of JDA SMF future operations. **ACTION:** D. Schwartz will set up a meeting for all the necessary participants to really, thoroughly discuss the future monitoring needs at the JDA SMF. ***STATUS:*** *Mackey talked with Lorz about a meeting. Lorz indicated he would meet with other FPAC members first to discuss smolt monitoring needs. Mackey is waiting to hear back.*

3. Updates. (B. Klatte)

3.1 Pinnipeds return to Bonneville. States started hazing Steller sea lions in December. Large numbers of sturgeon were found in the Bradford Is. fishway so seal bomb use was curtailed in the BRZ until the ladder was dewatered. Seal bomb use resumed 20-31 December. It ended a couple of days prior to the placement of the B-Branch entrance pool bulkheads and will resume once those bulkheads are placed on 2 January.

3.2 No sturgeon, or any fish at all, were found in the B-Branch entrance during dewatering on 7 January. The Project used diffuser flow to encourage any fish to leave.

3.3 There was a change in the lamprey distribution policy. The Umatilla and Nez Perce tribes will each be collecting 500 lamprey from JDA and TDA dewaterings. Any lamprey salvaged, after the tribes have collected their fish, will be returned to the river. This policy change occurred on 3 December.

3.4 TDA galvanized steel. Junction pool grates look good, no need to install new ones now.

3.5 JDA optimization study. Work is being done to prep for the spring study. There will be a request for some spill on 16 January and possibly on 17 January. Exact timing/ amount still unknown but RCC will be coordinating the teletype as soon as those details are worked out.

3.6 Ice Harbor dewatering. South Ladder unwatered to tailrace elevation January 9 for winter maintenance.

3.7 Lower Monumental dewatering. Juvenile collection channel unwatered and taken out of service January 2. The upper section of north ladder was unwatered January 7, followed by the lower section on January 9. The south ladder is to be unwatered in February.

3.8 Little Goose dewatering. Ladder dewatered January 3 for winter maintenance. One juvenile steelhead and one juvenile Chinook were salvaged and released.

3.9 Little Goose cormorant take. Research involving limited take of cormorants to determine species composition and degree of fish consumption commenced October 4. The final fourth and final "take" took place December 28.

3.10 Lower Granite. An emergency navigation lock outage prevented powerhouse crews from raising the remaining deployed ESBS until December 31. The collection channel was unwatered January 2.

4. WDFW fish counting. A review of the plan for the 2008 counting season. (Stephenson)

5. Sea lion hazing methods. BPA would like FPOM to review specs for the sea lion deterrent device (SLDD) and ACTIX's proposal.

6. SLED installation dates. (Hausmann)

7. BON B2CC opening date. (Hausmann)

8. Avian hazing/lethal take. (Klatte)

9. JDA south end unit overhaul. (Zyndol) JDA has fallen behind on 6yr O/H on units 1,3,4,5. Project would like to take the units out, two at a time, in July/Aug 08. Each O/H takes three weeks. FPP JDA-20 says units 1, 2, 5 should not be scheduled OOS during fish passage season.

Project Fisheries recommends scheduling U1 OOS ONLY if U2 can remain in service with no 100MW soft constraint. This appears to be allowable based on FPP JDA-22 "U2 will replace U1 when not operating". If the units come out in pairs, it is recommended that U1 and U4 occur in Aug (lowest passage) and U3 and U5 occur any other time.

10. JDA Unit 16 update. (Zyndol)

11. McNary fishway entrances update. (Moody)

12. FPP. How shall the draft be distributed? (Boyd)

13. TIES meeting following FPOM in the 8th floor Ops conference room (follow Bern).

SLDD – Sea Lion Deterrent Device

Stand-off Sea Lions from 50 to 200 meters

Specifications:

Input power -	**208-240vac, 1Ø, 60 Hz**									
Stored energy	**3kJ**			**6kJ**			**12kJ**			
Distance m	**50**	**100**	**200**	**50**	**100**	**200**	**50**	**100**	**200**	
Pressure Psi	**4**	**1**	**¼**	**8**	**2**	**½**	**16**	**4**	**1**	
Line power kva		**3**			**6**			**9**		
Duty Cycle										
Ave. sec.		**5**			**5**			**5**		
Burst sec.		**2**			**2**			**2**		

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December 1, 2007

Bonneville Power Administration
Integrated Fish and Wildlife Program, Mailstop KEWR-4
P.O. Box 3621
Portland, OR 97208-3621

Attention: Mr. Scott Bettin, Fish Biologist

Subject: Information on ACTIX's Sea Lion Deterrent System (SLDD)

Reference: 30 November 2007 telecon between S. Bettin/BPA and E. Ayers/ACTIX

Dear Mr. Bettin:

Advanced Conversion Technologies, Inc. (ACTIX) is pleased to provide the subject information in response to our telephone conversation. I will provide a short narrative on how the technology was developed and its current state of deployment.

The technology was developed in response to serious attacks by sea lions on the sportsfishing industry in San Diego, California. Our technology, originally developed for military applications, develops a tremendous shock wave that travels omni-directional in the water without the tremendous energy release into the ocean environment that explosives cause. We arranged a test in 1995 with the Sportsfishing Association of California on a fishing charter outside of San Diego bay with our own demonstration test unit. We were able to stand off all sea lion attacks while the fishing was able to continue. Additionally, we were able to scare away two other sea lions from another vessel at over 50 yards distance and by the end of the day the sea lions did not return to the area.

Based upon the successful results of our test in 1995, we received a contract in 1997 to build a portable device to be operated from San Diego sportsfishing vessels. Initial test data for the pressure levels and waveforms were captured and recorded by Greeneridge Services, Inc. and testing against sea lions was to be started in late 1998. However, due to the threat of a lawsuit brought by the Humane Society, all further testing was halted. In the following year the California Coastal Commission denied a permit to deploy the technology. In 2000, a comprehensive study was conducted by the U.S. Navy's SPAWAR facility at Point Loma, which showed the device did not permanently harm two sea lions subjected to several hundred shots from the device. The publication of this data did not change any decision by the California Coastal Commission and no further work was done. Given the political climate in California, where any means to effectively deal with the sea lion problem is considered inhumane, we did not pursue the program any further. However, based upon recent news reports detailing the use of lethal measures for problem sea lions at the Bonneville Dam, I thought the time was right to contact someone involved with this issue.

Our technology is able to more effectively couple the shock wave energy when compared to conventional explosives and offers the ability to adjust the power levels when needed, making it difficult for sea lions to acclimate to the pulses. Most recently in 2004, in tests on human divers at the U.S. Navy's Naval Underwater Weapons Center (NUWC) at Dodge Pond, Connecticut, our technology developed sufficient sound pressure to force the diver out of the water at over 120 yards. We believe this system can be deployed at fixed locations such at a buoy mooring and set to fire at either a random pattern to keep the sea lions from congregating in the area or set to go off when they arrive at a specific distance. The device is also compact enough to be mounted on a boat to provide mobile enforcement.

I have provided a picture our portable device along with its specifications. This is the same unit used in testing at the U.S. Navy's SPAWAR facility and the collection of data by Greeneridge Services, Inc. We also have copies of all independent reports from Greeneridge Services, Inc. and the U.S. Navy verifying the sound pressure and waveform measurements.

I have also included a copy of the Navy's SPAWAR report and I need to address a couple of issues relative to our technology. One major point I would like to make is that our system is not the same as the "sparker" technology developed by EG&G in the early 1950s. Our technology releases all of its energy in the microsecond domain versus the sparker technology in the millisecond domain. The faster energy release greatly increases the strength of the shock wave and produces no air bubble. We do not saturate the area with sound, unlike low frequency active sonar devices. Another point is in 2001, ACTIX became the successor to all the technology developed by Pulse Power Technology, Inc. (PPTI). I am clarifying this issue because PPTI is listed in the SPAWAR test documentation and report noted above, prior to the 2001 date.

I would like to further discuss our system in more detail and find hope we can find a way to have it tested at the Bonneville Dam. I look forward to your reply and can be reached at actix@att.net or at (619) 670-1612.

Sincerely,

Evan Ayers
Contracts Manager

Enclosures