Meeting called by Steve Hemstrom               Chairperson, Tracy Hillman
Notes taken by Teneille Hatmaker

Attending Representatives:

Haven, Bill         City of Entiat  (509) 784-1500  city@entiatwa.us
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Kerec, Matt         Alcoa         (412) 553-4361  matthew.kerec@alcoa.com
Lewis, Steve        USFWS         (509) 665-3508 x14  stephen_lewis@fws.gov
Rose, Bob           YN            (509) 865-5121  rosb@yakamafish-nsn.gov
Truscott, Kirk      CCT           (509) 978-8031  Kirk.truscott@colvilletribes.com
Verhey, Patrick     WDFW          (509) 754-4624  patrick.verhey@dfw.wa.gov

Attending Participants:

Hatmaker, Teneille  Chelan PUD     (509) 661-4758  teneille.hatmaker@chelanpud.org
Hillman, Tracy      BioAnalysts   (208) 321-0363  tracy.hillman@bioanalysts.net
Jackson, Chad       WDFW          (509) 754-4624 x250  chad.jackson@dfw.wa.gov
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Nelle, RD           USFWS         (509) 548-7573  RD_Nelle@fws.gov
Rainey, Steve (phone) USFWS (Consultant) (503) 260-6990  wsteverainey@aol.com
Underwood, Alene    Chelan PUD     (509) 661-5192  alene.underwood@chelanpud.org

Meeting Minutes

I. Welcome and Introductions

Tracy Hillman welcomed everyone to the Rocky Reach Fish Forum (RRFF) meeting. Participants introduced themselves.
II. Agenda Review

The agenda was reviewed and approved with the following additions:

- Tracy Hillman added USFWS Adult Lamprey Sampling at Dryden Dam to the agenda under Lamprey Section E
- Steve Lewis inquired about the expansion of White Sturgeon production at Marion Drain. Bob Rose explained that discussions on the expansion and supplementation will not occur within the Rocky Reach Forum because this topic is not relevant to this Forum and affects only Zone 6 (Columbia River between Bonneville Dam and McNary Dam). Bob Rose suggested that he and Steve Lewis talk at a later time.

III. Review and Approval of Meeting Minutes

Minutes from the 6 May RRFF meeting were reviewed and approved.

IV. Review of April Action Items

- Tracy Hillman will update the format for the meeting agendas. Complete
- Steve Lewis will send sample agenda formats to Tracy Hillman. Not needed
- Jason McLellan will inform Tracy Hillman who the alternate representative is for the Colville Confederated Tribes. Ongoing
- Tracy Hillman will contact Alcoa, the Department of Ecology, and the City of Entiat to verify their representative and alternate voting members. Complete; waiting for Ecology to respond
- Tracy Hillman will verify the correct email address for Keith Vradenburg, City of Entiat. Complete
- Steve Hemstrom will send out a first draft in track changes to Sections 4.2.3 and 4.4 of the PLMP by late May or early June. Ongoing; this is for the Pacific Lamprey Subgroup
- Tracy Hillman will send a reminder to Bob Rose to send his spreadsheets out to the Pacific Lamprey Subgroup. Complete
- Bob Rose will send a Revised Artificial Propagation Proposal to the RRFF on 6 May 2015. Complete
- Steve Lewis will send Tracy Hillman information from USFWS on genetic protocols for translocating adults. Ongoing
- The RRFF will review the revised SOA and submit comments to Bob Rose and the other members of the RRFF by 20 May. Complete
- Tracy Hillman will coordinate with Bob Rose on preparing the discussion for the 3 June RRFF meeting. Complete
- Jason McLellan will contact Steve McAdam to discuss the Ecopath with Ecosim model. He will
V. Pacific Lamprey

Rocky Reach Project Effects: NNI

The Pacific Lamprey Subgroup did not meet last month. The next Pacific Lamprey Subgroup meeting is scheduled for Tuesday, 9 June from 10:00 am to 4:00 pm in the Chelan PUD Fish and Wildlife building.

Steve Hemstrom said that Chelan PUD is in the process of making changes to Sections 4.2.3 and 4.4 of the PLMP. They also contracted with Anchor QEA to estimate the amount of available lamprey habitat that exists upstream from each dam on the Columbia and Snake rivers using a GIS-based habitat analysis. This would include assessing currently available rearing and spawning habitat within each tributary and each sub-basin upstream from the dam, including the Okanogan. Data will be used to help frame the possible effect level that Rocky Reach Dam has on Pacific lamprey relative to all other downstream hydro projects that adult and juvenile lamprey must pass. Steve Hemstrom reported that Anchor QEA has completed the first draft and Chelan plans to share the results with the Rocky Reach Pacific Lamprey Subgroup on 9 June 2015.

Bob Rose asked what information and conclusions can be drawn from the analysis. Steve Hemstrom explained that the data can be used to establish some annual contribution level to for NNI that is scientifically based relative to Rocky Reach’s location in the Columbia River and the relative amount of lamprey habitat that the Project can affect. It does not translate into a dollar figure immediately, but this analysis was a step that Chelan took to begin to frame possible mitigation levels. The analysis provides an understanding of the possible relative effects of the Project on production of lamprey in the entire Columbia River. Steve Hemstrom stated that of the rearing habitat available to Pacific lamprey in the Columbia River basin, about 45% is downstream from Bonneville Dam (including tributaries and the mainstem).

Update on Rocky Reach Screen Monitoring

Steve Hemstrom said that monitoring is currently underway and will take place from 15 May to 15 June. Steve had no additional information to report at this time.

Update on Artificial Propagation Proposal

Steve Hemstrom reported that Marty Whitman (Chelan PUD) is in the process of finalizing the contracts. Steve Hemstrom explained that there will be three separate contracts (one for the YN, one for Umatilla/NOAA, and one for the USFWS). The proposal is for three years, but there will be annual scopes of work and deliverables, which will provide updates each year. Bob Rose asked Chelan PUD to contact Ann Gannam (USFWS). She told Bob that she had some questions about the contracts.
Action Item:

- Alene Underwood will contact Ann Gannam regarding her contracting questions.

Update on Lamprey Passage at Tumwater Dam

RD Nelle stated that the report should be finished and ready to present at the July RRFF meeting. Steve Rainey provided an overview on the information contained within the report. He identified two potential passage issues. One possible barrier is in the entire zone upstream and downstream of the gates and the other is the actual operation of the two gates during the trapping periods. He noted that he thought the gates would create the greatest potential barrier.

RD Nelle will send the report to the Rapid Assessment Team once more to allow for any additional comments before finalizing the report and presenting it to the RRFF at the July meeting.

Steve Rainey recommended that those interested meet at Tumwater Dam on 30 June 2015, the day before the RRFF meeting. Steve Hemstrom was concerned that any information gained would not be very useful by the next day.

Alene Underwood expressed the need to involve Chelan PUD’s Fishway Attendants in any conversations regarding hydraulics and operating criteria. She explained that WDFW operates under a set of criteria and that those criteria must be run under the direction of Chelan PUD Fishway Attendants. Steve Hemstrom offered to speak with Thad Mosey and the Fishway Attendants to obtain the criteria that are used during trapping operations. To his knowledge, the ladder downstream from pools 18 and 19 must remain in criteria even when the trap door is shut. The ladder is not out of criteria while trapping is occurring. He added that he may be able to provide Steve Rainey with enough information to avoid the need for a second visit to the dam.

Action Items:

- RD Nelle will send the Lamprey Passage report to the RRFF before the July meeting.
- Steve Rainey will present findings to the RRFF in July.
- Tracy Hillman and Teneille Hatmaker will coordinate and schedule a WebEx for the RRFF meeting.
- Steve Hemstrom will meet with the Fishway Attendants and report back to Steve Rainey.

Lamprey Sampling at Dryden Dam

RD Nelle discusses his (USFWS) proposed plan to trap adult lamprey within the Wenatchee River. He believes this would be a good year to trap adult lamprey at Dryden Dam. RD confirmed that the proper permits have been obtained and the purpose is to obtain lamprey from the Wenatchee River that could be valuable for future studies. There are no plans to tag or evaluate these fish this year. However, if adult lamprey are captured, RD suggested that the RRFF could then choose how they would like to study
these fish. Steve Hemstrom stated that traps cannot be placed inside the fishways because the traps would cause potential impediments to other species including steelhead, salmon, and bull trout. Approval must first be requested and obtained before trapping can occur in the fishways.

**Update on 2014-15 Rocky Reach HDX-PIT Lamprey Detections**

Steve Hemstrom reported that adult monitoring at Rocky Reach Dam will continue until 15 June 2015. After that, the antennas and batteries will be shut down and all files and data will be sent to Rod O’Connor at Blue Leaf Environmental for processing and analyses.

Steve Hemstrom reviewed the lamprey passage figures he sent to the RRFF last week (see Attachment 1). The Forum discussed the accuracy of Bonneville Dam passage counts and the struggles the Army Corps of Engineers has to count accurately the total numbers of adult lamprey passing Bonneville Dam. Steve Hemstrom encouraged the Forum to review the Rock Island to Rocky Reach conversion rate figures he provided.

**Action Items:**

- Steve Hemstrom will send monitoring data to Rod O’Connor after 15 June.
- Tracy Hillman will add the lamprey passage figures to the June RRFF meeting notes.

**VI. Bull Trout**

**Bull trout and Tumwater Dam**

No updates to report

**VII. White Sturgeon**

**Update on Release of Juvenile Sturgeon**

Lance Keller reported that two releases took place on 30 April 2015. These fish were from the Chelan Hatchery. The final release occurred on 8 May 2015. A total of 6,500 juvenile sturgeon were released into the project area. Lance Keller will provide the Forum with release numbers by location.

**Action Item:**

- Lance Keller will distribute release numbers by location to the RRFF.

**Update on 2015 Broodstock Collection and Spawning**

Lance Keller noted that broodstock collection for 2015 was a joint effort between Chelan PUD and Grant
PUD downstream from McNary Dam. Because of warm river temperatures, collection began on 7 May. Blue Leaf Environmental was the contractor used by both Chelan PUD and Grant PUD. Blue Leaf monitored the river temperatures and discovered that the river temperatures were about 20 days ahead of the ten-year average. Based on this information, it was decided that broodstock collection would begin early. Collection continued through 15 May 2015. A total of 13 males and 12 females were taken to Marion Drain where 11 out of the 12 females were found ready to spawn.

Lance reported that Donella Miller with the Yakama Nation received 10 females and injected 15 males, 10 of which were used in spawning. The goal was a 10 x 10 cross. On Thursday, 28 June 2015, they spawned a 5 x 10, but were only able to take a 3 x 10 to Columbia Basin Hatchery. That night, an additional female produced eggs and they were able to cross that female with 5 additional males (1 x 5 matrix). Those crosses were taken to Chelan Hatchery the following day. Lance expects the fertilized eggs to begin hatching within the next few days.

Phase 2 Sturgeon Conservation Program (Ecopath with Ecosim)

Both Grant and Chelan PUDs attended the Upper Columbia White Sturgeon Recovery Initiative meeting in Spokane at the end of April 2015. They had the opportunity to speak with Steve McAdam (UBC Fisheries Centre) regarding the Ecopath with Ecosim (EwE) model and the possibility of Steve presenting his thoughts to the Fish Forums. Steve Hemstrom made note that the utility of the model will be based on the availability of real data from Rocky Reach.

Tracy Hillman noted that the Priest Rapids Fish Forum (PRFF) proposed that a conference call be scheduled between the two Sturgeon Subgroups and UBC. This would allow the Subgroups an opportunity to ask Villy Christensen and Steve McAdam questions about the model and what data they need to populate the model. It would also give Villy and Steve an opportunity to ask questions of the Subgroups. The Forums need to identify what questions they have for the experts and what data are available for populating the model. The RRFF was in favor of the PRFF proposal and agreed to begin developing questions.

Action Items:

- Members of the RRFF will identify questions for the modelers.
- Tracy Hillman will contact the experts at UBC to begin coordinating a conference call.
- Tracy Hillman will send EwE papers to the RRFF to help them develop questions for the experts.

SOA: Release Strategy for 2016 and Proposed Workshop

Tracy Hillman described the three different SOAs (WDFW, YN, and Chelan PUD) and indicated that because not all parties could agree to the SOAs, he received calls from policy representatives stating their desire for the RRFF and PRFF to host a white sturgeon workshop that would give policy
representatives the opportunity to ask the technical representatives (and outside experts if necessary) questions about carrying capacity, estimation of carrying capacity, and how those estimates will guide future juvenile release strategies. Tracy asked the Forum if they would like to try and approve an SOA or host a workshop to flesh out both technical and policy-level issues. The RRFF agreed to move forward with a workshop and postpone discussion on the SOAs until after the workshop. Steve Hemstrom noted that although Chelan PUD agrees to the workshop, the RRFF needs to understand that regardless of the outcome of the workshop, in the interim, before carrying capacities are determined, Chelan PUD will not commit to a mandatory release number. They will commit to the effort to collect adequate broodstock to allow for a 6,500 juvenile release, but not to the requirement for a rolling three-year average stocking rate of 19,500 juveniles.

Alene Underwood explained that the only reason Chelan PUD is moving forward with the release of 6,500 juveniles in 2016 is because they have the genetics to back it up. She expressed the need to move forward with establishing an interim SOA. Steve Hemstrom asked that all parties read and understand the language contained in the White Sturgeon Management Plan and SOA proposed by Chelan PUD. Steve Hemstrom discussed the changes Chelan PUD made to the SOA, which included a commitment of effort to reach the 6,500 fish per year release target. Bob Rose stated that the RRFF could discuss these changes but they would not make progress until after the workshop. He believes the agreement should be based on biological objectives and outcomes, and this agreement (Chelan PUD SOA) appears to be a budgetary constraint solely determined by the PUD. Chad Jacks noted that modifications to the language of the SOA will be needed to make it current, because brood for 2015 has already been collected. The Forum discussed the appropriate policy people that will need to be involved in this workshop. Tracy Hillman will develop themes for the workshop and will send those to the RRFF for review.

Action Item:

- Tracy Hillman will identify the major themes for the workshop and send those to the RRFF for review.

VIII. Next Meeting

The next regular meeting of the RRFF will be on Wednesday, 1 July 2015 from 1:00 to 4:00 p.m. in the Chelan PUD Second Floor Conference Room.
Attachment 1

Figures of Adult Pacific Lamprey Counts, Passage Timing, and Conversion Rates (Prepared by Steve Hemstrom)
Figure 1. Adult Pacific lamprey passage counts at Bonneville Dam and Rock Island and Rocky Reach dams, 1999 to 2014.
Figure 2. Adult Pacific lamprey passage counts at Rock Island Dam and Rocky Reach Dam, 2000 to 2014. (** 2014 Rock Island count includes 2,451 window count plus 2,149 fish transported upstream by Grant PUD and released into Rock Island Reservoir).
Figure 3. Adult Pacific lamprey passage counts at Rocky Reach Dam and Wells Dam, 2000 to 2014.
Figure 4. Duration of time (days) for the middle 90% of the adult lamprey run-at-large to pass Rocky Reach Dam 2000-2014 based on annual total fishway window counts and dates of the first and last adult lamprey passage through the fishway.
Figure 5. Rocky Reach Dam adult Pacific lamprey middle 90% passage duration (days) and corresponding average Project annual discharge (kcfs) from July 1 to September 30, 2000-2014.
Figure 6. Duration of time (days) for the middle 90% of the adult Pacific lamprey run-at-large to pass Rocky Reach Dam before and after fishway modifications. Mean passage days reduced from 57 days (2000-2010) to 44 days (2011-2014) after fishway improvement for lamprey were completed in 2011.
Figure 7. Rocky Reach Dam 11-year (2000-2010) cumulative daily passage counts of adult Pacific lampreys and middle 90% passage dates.

Rocky Reach Adult Pacific Lamprey Cumulative Daily Passage Counts and Middle 90% Passage Dates, 2000-2010

- Total cumulative count = 9,712
- Mean annual count = 883
- Mean 90% Passage = 57 days
  2 August - 27 September
**Figure 8.** Rocky Reach Dam 15-year cumulative daily passage counts of adult Pacific lampreys and middle 90% passage dates.
Figure 9. Adult Pacific Lamprey conversion rates from the top of Rock Island Dam to the top of Rocky Reach Dam. Conversion rate is calculated as the ratio of the total number of fish counted at the Rocky Reach fishway count-window to the total number counted at the Rock Island fishway count-window, unadjusted for Wenatchee River escapement or fall back at either dam.
Figure 10. Five-year rolling average adult Pacific lamprey conversion rates from Rock Island Dam to Rocky Reach Dam, 1995 to 2013. Rolling average conversion rates are the average of last five consecutive years, and are not adjusted for Wenatchee River escapement or fall back at either dam.
**Figure 11.** Adult Pacific lamprey conversion rates from the top of Rocky Reach Dam to the top of Wells Dam, 2000-2014. Conversion rate is calculated as the ratio of the total number of fish counted at the Wells fishway count-window to the total number counted at the Rocky Reach fishway count-window, unadjusted for Entiat River escapement or fall back at either dam.