

Rocky Reach Fish Forum

Wednesday, 4 November 2015

1:00 – 4:00 p.m.

Chelan PUD Second Floor Conference Room

Wenatchee, WA



Meeting called by Steve Hemstrom
Notes taken by Teneille Hatmaker

Chairperson, Tracy Hillman

Attending Representatives:

Hemstrom, Steve	Chelan PUD	(509) 661-4281	steven.hemstrom@chelanpud.org
Lewis, Steve	USFWS	(509) 665-3508 x14	stephen_lewis@fws.gov
Rose, Bob (phone)	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 (phone)	WDFW	(509) 754-4624 x250	chad.jackson@dfw.wa.gov
Keller, Lance	Chelan PUD	(509)661-4299	lance.keller@chelanpud.org
Miller, Donella (phone)	YN	(509) 945-0132	mild@yakamafish-nsn.gov
Nelle, RD	USFWS	(509) 548-7573	RD_Nelle@fws.gov
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. Attendees introduced themselves. Tracy made known that the meeting was voice recorded for note-taking purposes.

II. Review of Agenda

The agenda was reviewed and approved with the following changes. Bob Rose asked that “Juvenile Lamprey Survival Studies” under Section B of Pacific Lamprey be removed from the agenda this month and revisited at the next Rocky Reach Fish Forum (RRFF) meeting. Because of time constraints, Chad Jackson asked that we begin the meeting by discussing White Sturgeon topics first. Finally, Lance Keller encouraged the group to postpone any decisions related to modifications of the White Sturgeon Monitoring Plan until after the upcoming policy meeting. The RRFF approved the changes to the agenda.

III. Review and Approval of Meeting Minutes

The August Meeting Minutes were reviewed, approved, and finalized.

IV. Review of December Action Items

- Lance Keller will send out a report on the proposed changes to the White Sturgeon Monitoring Plan. **Ongoing**
- Lance Keller will contact Corey Wright of Blue Leaf Environmental regarding his availability for the September white sturgeon subgroup meeting. **Complete**
- Everybody should read the White Sturgeon Monitoring Plan before the subgroup meeting on 2 September. **Complete**
- Heidi Kunz will schedule WebEx and the Chelan PUD auditorium for the White Sturgeon Workshop on 7 October. **Complete**
- Steve Hemstrom will create a survival table showing hypothetical survival rates through time for the White Sturgeon Workshop. **Complete**
- Tracy Hillman will create a proposed agenda for the White Sturgeon Workshop. **Complete**
- Tracy Hillman will contact Chad Jackson about having Brad James speak at the White Sturgeon Workshop. **Complete**
- Tracy Hillman will invite the sturgeon experts to the White Sturgeon Workshop after he receives approval from Chelan PUD. **Complete**

- Tracy Hillman will prepare an agenda for the white sturgeon subgroup meetings on 2 September. **Complete**
- Everybody should read the Final Draft Rapid Assessment of Adult Pacific Lamprey Passage at Tumwater Dam report from Steve Rainey. **Ongoing**
- Steve Hemstrom will send the report on passage rates to Tracy Hillman for distribution. **Complete**
- Tracy Hillman will add passage rates to the agenda for future meetings. **Complete**

V. White Sturgeon

Juvenile Rearing Update

Lance Keller reported that he did not have updated numbers at Columbia Basin Hatchery; however, the fish are doing well there. Rearing at Chelan Hatchery is also going well. They have graded and sorted juvenile fish based on size. Lance said the fish range from 37.3 fish/lbs to 112 fish/lbs. The hatchery manager, Corey Morrison, told Lance that although the size gap was wide, it has narrowed and the fish have responded well to feeding. Corey Morrison will try to close the size gap and sort fish again soon. At this time, Chelan Hatchery has 3,804 juveniles on station. Initial health screening for White Sturgeon Iridovirus (WSIV) has occurred at the Chelan and Columbian Basin hatcheries. The results indicate that both hatcheries are free of WSIV.

White Sturgeon Workshop Outcomes

Tracy Hillman provided an overview of the RRF and PRFF White Sturgeon Workshop that took place on Wednesday, 7 October. Tracy said policy and technical representatives and invited experts attended the workshop.

Tracy reported that during the morning sessions, the groups discussed current monitoring results, identified possible gaps in monitoring, and described possible updates to the monitoring plans. Importantly, the monitoring plans are collecting the information required under the White Sturgeon Management Plans. However, as noted by the sturgeon subgroups, more frequent sampling and analyses of stomach contents (diets) will improve the Forums ability to identify density-dependent effects. Tracy said the policy representatives found this information very useful.

In the afternoon, invited experts presented information on sturgeon genetics and stocking programs outside the project areas. Following the presentations by the invited experts, policy representatives discussed next steps, including the development of a decision-support framework. The policy representatives will meet at Chelan PUD on Friday, 6 November, to discuss what information needs to be included in the decision-support framework. For example, they will discuss the importance of genetics, survival rates and population growth rates, broodstock collection efforts, ecological

interactions (including food webs), carrying capacity and density dependence, and harvest opportunities. Once they identify what information should be included in the framework, they will provide ideas on how to rate the quality of the data. They will also identify methods for assessing risks and consequences. Lastly, they will discuss ways to weight the information in the decision-support framework.

Tracy Hillman recommended that each technical representative take time to speak with their policy representatives prior to the policy meeting on Friday. He and Steve Hemstrom expressed the importance of policy representatives being prepared, having a solid foundation and background on sturgeon issues in the project area. Tracy reminded the Forum members that it is their responsibility to ensure their policy representatives are informed and prepared. Bob Rose asked Tracy to do what he can to secure concrete information and recommendations from the policy representatives.

Action Item:

- **Technical representatives will take time to prepare and inform their policy representatives on sturgeon issues in the project area prior to the Policy Meeting on 6 November 2015.**

Update from Sturgeon Subgroup Meeting

Tracy Hillman said according to the White Sturgeon Management Plan, the number of juvenile sturgeon to be released into the project area following the initial front-loading of 19,500 juveniles would be based on monitoring results. As the RRFF heard during their last meeting, the monitoring program has not yet been able to measure carrying capacity. Therefore, during the last RRFF meeting, the Forum directed the sturgeon subgroup to convene to review the existing sturgeon monitoring plan and determine if there are potential gaps in the monitoring plan. If so, the RRFF asked the subgroup to identify possible ways to improve the monitoring plan. Tracy said the subgroup met on Wednesday, 2 September, to evaluate the current monitoring plan. Tracy asked Lance Keller to provide an update on the subgroup meeting.

Lance Keller reported that the subgroup evaluated the current monitoring program and concluded that the monitoring program is collecting the information required by the White Sturgeon Management Plan. That said, Lance noted that the monitoring program could be strengthened by increasing the frequency of sampling. The recommendation from the subgroup is to conduct annual juvenile monitoring through 2018. At that time (2018), the Forum will reevaluate the monitoring program to see if other changes are necessary, including the possibility of reducing the frequency of sampling. The subgroup also recommended the inclusion of seasonal diet analyses. That is, the proposed recommendation is to conduct four independent analyses of diet composition throughout the year.

Kirk Truscott recommended periodic repeats of diet analysis as species assemblages change over time. Lance agreed and said that is why the subgroup recommended seasonal (four) diet analyses. Steve Hemstrom added that it will take the full three years of seasonal sampling to have a good understanding

of the diets of sturgeon in the project area.

VI. Pacific Lamprey

Ladder Passage Counts and Rock Island to Rocky Reach Conversion Rates

Steve Hemstrom provided a spreadsheet on Adult Lamprey Dam Counts, which included fishway window counts at the top of the ladders at both Rock Island and Rocky Reach dams. These data can be used to estimate season-wide fishway passage efficiency. Steve Hemstrom provided the following information:

- 2,164 adult lamprey counted at Rock Island between 14 April and 21 October 2015
- 2,133 adult lamprey counted at Rock Reach between 14 April and 21 October 2015
- Conversion rate = 98.6%

Steve Hemstrom explained that these are raw data and are not corrected for fish that may fallback at each dam, re-ascend and are re-counted, numbers of fish that escape into the Wenatchee River, or the number of fish that overwinter in the Columbia River downstream from Rock Island or Rocky Reach dams and pass during the next year. Steve Hemstrom said all these factors can influence the conversion rate estimate.

RD Nelle shared some of the acoustic tagging results presented by Grant PUD during the PRFF meeting this morning. He said of the adult lamprey tagged and released by Grant PUD, 13 were found at Duck Tail Rock in Rocky Reach Reservoir near the sturgeon array by the Chelan Tunnel, 17 were found at the mouth of the Entiat River, three in the Entiat River, and four in the Wenatchee. Tracy Hillman encouraged Steve Hemstrom to monitor locations of these fish to see if they can be used to refine the conversion rates.

RD Nelle asked if Chelan PUD would be willing to perform mobile tracking and detection within tributaries. Steve Hemstrom and Alene Underwood indicated that Chelan PUD would not because the effort required would be too great for such a small sample size and fish entry and movement in the tributaries could be evaluated using the PIT tags in these fish.

Bob Rose said that the Yakama Nation may have a person who could help Chelan PUD with compiling and analyzing dam passage data for the Federal Columbia River Power System (FCRPS) dams. Steve Hemstrom accepted the offer. Bob agreed to coordinate this effort.

Action Item:

- **Steve Hemstrom and Bob Rose will arrange the assistance from Yakama Nation's intern to help with compiling and analyzing FCRPS dam counts and conversion rates.**

Rocky Reach Project Effects (NNI)

Tracy Hillman said that in August, the RRF asked the Pacific Lamprey Subgroup to convene and discuss some of the technical aspects associated with the proposed draft actions and the spreadsheet prepared by Bob Rose. The subgroup has met twice. They have taken the proposed actions and divided them in to two categories: (1) proposed actions that may address adult NNI and (2) non-NNI actions.

Proposed Actions that may fall under Adult NNI (Objective 4 in RRF WSMP):

1. Translocation of Adults to Tributaries to Supplement Natural Production of Pacific Lamprey.
2. Artificial Propagation and Release of Juvenile Pacific Lamprey to Supplement Natural Production in Tributaries.
3. Juvenile Population and Habitat Monitoring.
 - Assess status of juvenile lamprey within tributaries before initiation of translocation and artificial propagation.
 - Assess the capacity of habitat for juvenile Pacific lamprey rearing.
 - Assess the probability of juvenile Pacific lamprey transitioning from one life stage to the next within tributaries.
 - Determine the parents of juvenile Pacific lamprey produced within tributaries.
4. Adult Movement and Behavior within Tributaries.

Proposed Actions to Partially Address Non-NNI Tasks or Objectives in the Management Plans:

1. Adult Pacific Lamprey Movement and Behavior within Reservoirs.
2. Presence of Juvenile Pacific Lamprey within Reservoirs.
3. Juvenile Pacific Lamprey Pilot Passage Studies.
 - Determine if tags and macrophthalmia are available to conduct juvenile passage studies.
 - Identify the appropriate study design and model for estimating juvenile survival rates (e.g., Cormack-Jolly-Seber (CJS) model).

Tracy said the subgroup has been working hard and has resolved many of the technical issues, but they have significant action items left to address including preparing an introduction that provides context and background for these studies. Alene Underwood asked who specifically is writing the report. Tracy answered that he has been compiling the document during the subgroup meetings. The subgroup is currently reviewing the draft proposed actions and each entity will determine if they agree with and can

support the draft proposed actions. They will then review the technical details associated with each draft proposed action. Tracy said the subgroup has no recommendations to make to the RRFF at this time.

Kirk Truscott reminded the Forum that the subgroup will also work towards compiling all available data, and will summarize the state of knowledge on lamprey. Steve Hemstrom questioned the scope of this compilation and Kirk said this should not be confined strictly to the project area but the entire Upper Columbia.

Tracy Hillman explained that the subgroup is working to make draft recommendations to the RRFF that are consistent with the existing Pacific Lamprey Management Plan. They are trying to avoid proposing any draft recommendations that would require changes to the Management Plan.

Action Items:

- **Steve Hemstrom will re-send the lamprey intrinsic potential results to RD Nelle.**
- **The Pacific Lamprey Subgroup will continue to work on proposed draft recommendations and will provide updates to the RRFF during the next meeting.**
- **Tracy Hillman will send out a Doodle Pole to the Pacific Lamprey Subgroup to identify at least two more meeting dates.**

Rocky Reach Screen Monitoring

Steve Hemstrom reported that the review of video is not complete. Alene Underwood reported that Chelan PUD is in the process of bringing on additional qualified help to continue with these efforts. Steve Hemstrom will provide an update during the next RRFF meeting.

Update on Artificial Propagation

Steve Hemstrom reported that significant progress has been made on setting up the artificial propagation contracts. The legal team has decided on the necessary pieces for the legal framework of the agreement for Yakama Nation's Artificial Propagation contract and this agreement has been signed by Chelan PUD.

Steve Hemstrom noted that NOAA Fisheries could not accept funds prior to the start of the new fiscal year. Their fiscal year began on 1 October 2015 and they can now accept the contract. Steve also said the USFWS/USGS contract is complete.

RD Nelle asked Steve Hemstrom if Chelan PUD still prefers to have juvenile lamprey reared in the Upper Columbia if propagation is implemented. Steve Hemstrom responded that he doesn't believe that Chelan PUD will care as long as the facilities are rearing healthy lamprey as efficiently and effectively as possible.

Update on 2014-2015 Rocky Reach HDX PIT-Tagged Lamprey Detections

Steve Hemstrom reviewed some of the results from his PIT-tag analyses. Steve said he will finalize the results and distribute them to the RRF. Steve provided the following results:

In 2014:

- 288 unique HDX PIT tagged fish were detected in 2014 at Rocky Reach Dam.
- 192 of 288 exited Rocky Reach Dam for a passage rate of 66.7%.
- In October 2014, two of the three exit antennas comprising the uppermost fishway detection site (RR07) were not functioning for two weeks in the upper ladder. In that time frame, the total last detected was 16 of 288 (5.5%). This error is referred to as an epic error.
- Two of 288 (1%) were last detected at the entrance (detected at entrance and not again). This indicates an entrance efficiency of 99%.
- 79 of 288 (27.4%) were last detected within the fishway. One tagged fish was found in the fishway during season end de-watering for maintenance.
- Net drop-back was 12.5 % (36 of 288).
- Net fallback was 2.8% (8 of 288).

Steve Hemstrom explained that the 288 unique HDX PIT tagged fish included two fish that were first detected in 2015.

In 2015:

- 37 unique tags were detected in 2015 at Rocky Reach Dam.
- 26 of 37 (70.3%) last detected at exit fishway.
- 5 of 37 (13.5%) last detected at entrance (detected at entrance and not again).
 - 3 of the 5 (60%) were last detected at the left fishway entrance.
- 4 of 37 (10.8%) were last detected in the fishway in 2015.
- Net drop-back was 10.8% (4 of 37).
- Net fallback was 5.4% (2 of 37).

Steve Hemstrom will ask Rod O'Connor with Blue Leaf Environmental to provide clarification on the two fish that were tagged by Chelan in 2014, but were not detected until 2015. He will also verify if the 2014 and 2015 data can be combined.

Steve Hemstrom then reviewed travel time statistics. He reminded the Forum that Chelan PUD released all 276 PIT tagged adult lamprey at Hydro Park. Minimum time from release to first detection at an entrance at Rocky Reach was 0.22 days. Maximum time from release to first detection at entrance was 48.34 days. The mean (average) time for all tagged fish released and detected at Rocky Reach was 3.56

days; median time was 1.32 days.

Minimum travel time between fishway entrance and exit at Rocky Reach Dam was 0.18 days (based on a sample size of 131 lamprey). The maximum travel time between entrance and exit was 28.1 days. The mean was 3.14 days; median was 0.63 days.

The minimum travel time from release at Hydro Park to the exit of the Rocky Reach fishway was 0.51 days (based on a sample size of 144 lamprey). The maximum time between release and exit was 46.53 days. The mean was 4.51 days; the median was 1.7 days.

Fishway Entrance Efficiency was 85.1% (235 out of 276).

Action Item:

- **Steve Hemstrom will finalize the HDX PIT-Tag lamprey analysis with the help of Rod O'Connor and provide the document to the RRF.**

Results from Dryden Canal Dewatering and Juvenile Lamprey Rescue

Steve Hemstrom reported that Chelan PUD, WDFW, USFWS, and the Yakama Nation took part in the process of rescuing juvenile lamprey from the Dryden Canal. Steve said that a total of 8,999 juvenile lamprey were captured, but the total population size is uncertain at this time. Steve noted that the fish were transported and released by the Yakama Nation at two downstream locations. The Forum asked Tracy Hillman to contact Ralph Lampman to verify the location of these release sites.

RD Nelle stated that Barb Kelly-Ringel (USFWS) went back out with the electrofisher for a second follow up and sampled 15-20 meters upstream of the screen and some distance downstream from the screen. They captured three ammocoetes downstream and two upstream from the screen. RD asked what the long term plan for Dryden Dam is and Steve Hemstrom answered that as long as the dam is working, rescues would continue annually. Alene Underwood explained that the rescues took place every 5 or 6 year, but the last couple of years they have seen much more fine sediment deposition within the canal. They will remove sediment again late winter of 2016 outside of the dam at the headworks. The sediment is taken offsite because there is no place to dump it near the dam.

Steve Lewis asked if Chelan PUD has thought about ways to preclude fish from getting in there at all. Alene explained that this has been considered but the infrastructure creates limitations and the biggest issue is that Chelan does not have water rights to extend canal operation throughout the year. As of now, the current process of rescuing juvenile lamprey works well.

Action Item:

- **Tracy Hillman will contact Ralph Lampman to determine the specific release locations for juvenile lamprey captured at Dryden Dam.**

Review Recommendations on Lamprey Passage at Tumwater Dam

Tracy Hillman stated that during the last meeting, the RRF was asked to review and approve the report titled, "Final Draft Rapid Assessment of Adult Pacific Lamprey Passage at Tumwater Dam" prepared by Steve Rainey. Members asked for additional time to review the report. The RRF agreed to spend more time reviewing the report. Members will provide final comments on the report during the December RRF meeting.

Kirk Truscott questioned how the RRF will address regulatory permitting if we come to consensus on adult translocation. The Forum asked Steve Lewis to research and provide clarification on the regulatory permitting questions and verify coverage. Bob Rose also asked that the USFWS identify their key concerns, constraints, and rationale. Steve Lewis agreed and said that the permitting issues are likely covered, but he will take a closer look and report back to the Forum in December. Bob Rose added that in the past, transport permits have been required but permitting was not an issue for the Yakama Nation or other tribes conducting lamprey translocation work.

RD Nelle provided a juvenile lamprey distribution update to the RRF. He said the USFWS sampled the upper Okanogan River, upper Methow River basin, Mad River, Peshastin Creek, Wenatchee River upstream of Tumwater Dam, and Chelan Falls. He said they found no juvenile lamprey in those locations. They are trying to identify where juvenile lamprey are not as well as where they are. RD said they have a few other locations to sample if weather permits.

Action Items:

- **The RRF will review the Final Draft Rapid Assessment of Adult Pacific Lamprey Passage at Tumwater Dam report and provide comments during the December RRF Meeting.**
- **Steve Lewis will research and provide clarification on the USFWS position on adult Pacific lamprey translocation.**

VII. Bull Trout

Bull Trout and Tumwater Dam

Steve Lewis reported that he had no bull trout updates to share with the RRF. However, he did describe his efforts to begin drafting a letter clarifying "take" at Tumwater Dam. He would like to share this with the group once he completes the draft. He said he will also share the draft letter with the HCP Hatchery Committees.

RD Nelle asked Chelan PUD when their telemetry studies relating to bull trout will occur. Steve Hemstrom responded that at this point Chelan PUD is looking at conducting the studies during May, June, and July of 2018, but they will need to start planning around mid-2017. RD encouraged getting the most use out of the fish that are tagged and asked that future discussions take place before tags are

purchased.

VIII. Public Comments

Tracy Hillman asked for public comments. No comments were made.

IX. Next Steps

The next regular meeting of the RRFF will be Wednesday, 2 December 2015 from 1:00 to 4:00 p.m. in the Chelan PUD Second Floor Conference Room.