

Columbia River System (CRS) Fish Facility Design Review Work Group (FFDRWG)

USACE, Portland District (NWP) and Walla Walla District (NWW)

November 2024 Meeting Notes



November 7, 2024

Meeting link:

<https://usace1.webex.com/meet/charles.a.barnes>

Join by phone:

+1-844-800-2712 US Tool Free

+1-669-234-1177 US Toll

Access code: 1993 86 9182

1 FFDRWG contact list - *** notify Chuck and Jake of any changes*

Blue names indicate in attendance.

BPA	Tom Lorz (CRITFC)	Doug Baus	Michael Lotspeich (JDA)	Karen Zelch
Christine Petersen	Laurie Porter (CRITFC)	Tim Dykstra	Laura Rickets (JDA)	Greg McBride
Leah Sullivan	Greg Silver (CRITFC)	Dan Feil	Robert Wertheimer (FFU)	CENWW-OD
Ben Hausmann	Aaron Jackson (CTUIR)	Cindy Studebaker	Patricia Madson (FFU)	Chris Peery
Carolina Andes	Ralph Lampman (YN)	Lisa Wright	Darren Gallion (FFU)	Tiffany Stoeckig-Dixon
Josh Ashline	Tod Sween (NPT)	Sean Tackley	Kyle Tidwell (FFU)	Denise Griffith
Tammy Mackey	Jay Hesse (NPT)	Ian Chane	CENWP-ENC	Elizabeth Holdren
NOAA	Lyman Jim (CTWS)	CENWP-PM	Aaron Litzenberg (HD)	Ken Fone
Blane Bellerud	Casey Baldwin (CTCR)	Ida Royer	Shari Dunlop (HD)	Bobby Johnson
Gabriel Brooks	Michael Karnosh (CTGR)	Erin Kovalchuk	Chris Motti (HD)	Deb Snyder
Trevor Conder	Lawrence Schwabe (CTGR)	Mark Bierman	Steve Schlenker (HD)	Steve Lee
Claire McGrath	Torey Wakeland (CTGR)	Nathan McClain	Max Wilson-Fey (HD)	CENWW-ENC
Kelsey Swieca	Keely Murdoch (YN)	Jake Macdonald	Adam White (DE)	Jon Renholds
Chris Magel	NPCC	Jon Rerecich	Brandt Bannister (DE)	Sean Milligan
Kinsey Frick	Kris Homel	David Trachtenbarg	Collin Porter (DS)	Ryan Pestes
Dana Bethea	FPC	Scott Fielding	Dan Penn (DM)	Travis Foster
USFWS	Erin Cooper	Marie Adams	Cole Marfise (DM)	John Lomeland
Dave Swank	Noah Campbell	CENWP-OD	Adam Jones (DG)	Ryan Laughery
Shelby Fowler	PSMFC	Jeanette Flemmer (BON)	CENWW-PM	Andrew Glencross
Joe Skalicky	Gordy Axel	Tucker Gossett (BON)	Chuck Barnes	Levi Paul Van Stedum
States	Darren Chase	Jase Owens (BON)	Ryan Ashcraft	
Erick Van Dyke (ODFW)	Roger Clark	Becca Cates (BON)	Steve Sipe	
Ben Clemens (ODFW)	Mark Leonard	Eric Grosvenor (TDA)	Ricardo Walker	
C. Morrill (WDFW)	Scott Livingston	Jeff Randall (TDA)	Brad Trumbo	
Jonathan Ebel (IDFG)	Nicole Tancreto	Aaron Young (TDA)	Michael Erickson	
CRITFC/Tribes	CENWD	David Miller (JDA)		

2 Action items from previous meetings

2.1 **Jake Macdonald** will schedule a Webex call for interested FFDRWG and FPOM participants with relevant experience to help CRITFC/Tribes develop a video monitoring plan for when the floating lamprey collector prototype is being tested in open water. PENDING.

3 NWP Topics for FFDRWG Update/Review/Coordination

3.1 NWP TDA Backup AWS debris management – **Marie Adams (PM)**, Mehdi Roshani (TL), Jon Rerecich (FFDRWG)

3.1.1 Marie Adams and Mehdi Roshani Presentation. Note that the recommended changes in language are currently being worked but are not reflected in the presentation.

3.1.2 Trevor: Did Tom recommend removing the floating debris boom?

3.1.3 Jon: Yes, Tom stated it would make sense to remove the floating debris boom because the cost would out weight the effectiveness.

3.1.4 Trevor: I don't believe Tom is asking to remove the boom entirely, just become less reliant on it. Can we move the boom's location rather than removing it completely?

3.1.5 Jon: Yes, that is what the plan is. We don't think that the boom is effective at removing the majority of debris.

3.1.6 Trevor: Have you run this idea by Tom? I think this topic needs more conversation.

3.1.7 Jon: I will set up further conversations with the necessary folks and PDT.

3.2 NWP BON Spillway rock mitigation – Marie Adams (PM), Adam Jones (TL), Scott Fielding (FFDRWG)

3.2.1 Marie Adams and Adam Jones presentation.

3.2.2 Trevor: Do you have examples of similar designs used in large river systems?

3.2.3 Adam: The Dalles has a similar design and has been successful. We are confident that this design will also be successful.

3.2.4 Erick Van Dyke: Six quarters then expect to have a pause?

3.2.5 Marie: Yes.

3.3 NWP BON1 lamprey passage improvements – Erin Kovalchuk (PM), Adam White (TL), Jake Macdonald (FFDRWG)

3.3.1 Adam White: B Branch Wier. The system performed well this season therefore we are looking to increase lamprey holding capacity.

3.3.2 Adam White: Replacing the existing water pumps at the Cascade and Bradford Island lamprey flumes. The install is scheduled for 25-26 winter and will provide better flow control and reliability.

3.4 NWP BON2 control section redesign – Erin Kovalchuk (PM), Adam White (TL), Jake Macdonald (FFDRWG)

3.4.1 Adam White. Contract has been protested. The team will need time to respond. There is potential the project will not be completed on the original schedule, but it is TBD. Worst case, we will have to wait 2 years for project completion.

3.5 NWP TDA lamprey passage improvements – Erin Kovalchuk (PM), Adam White (TL), Jake Macdonald (FFDRWG)

3.5.1 Adam White: Completed earlier this year, preformed great, looking into increasing lamprey holding capacity.

3.6 NWP JDA lamprey passage improvements – Erin Kovalchuk (PM), Adam White (TL), Jake Macdonald (FFDRWG)

3.6.1 Adam White: Water supply is scheduled for repair before May. This will allow time for testing prior to the 25 season.

3.7 NWP BON1 PIT Detection – Mark Bierman (PM), Jeanette Flemmer (FFDRWG)

3.7.1 Mark Bierman: Working on ironing out some fine details, but install is scheduled for December 6 start.

3.7.2 Trevor: This is the ice and trash sluice, right?

3.7.3 Mark: Yes, just trying to get the shields installed properly.

3.7.4 Trevor: Is there any update of the talk of adult detection?

3.7.5 Chuck: There has been conversation, we are still working on a path forward. Will bring it up in SRWG.

3.7.6 Trevor: Need to consider if the project is moving forward, it will be a very tight timeline.

3.8 NWP prototype floating adult lamprey collector for tribal translocation (*partner project; not a USACE design) – Ralph Lampman (TL), Jake Macdonald (FFDRWG)

- 3.8.1 Ralph Lampman FALCON presentation.
- 3.8.2 Trevor: This needs to be tested outside of salmon passage areas. Now you are suggesting getting very close to passage points, salmonids will be interacting with the attraction flow. We need to think about the location closer to ensure there will be no significant impact on salmon migration.
- 3.8.3 Sean: Trevor, would moving the collector closer to shore help? Trying to understand exactly what the concerns are.
- 3.8.4 Trevor: We don't know what this thing is going to do. If it is right in the flow salmon will be attracted to it, so I don't feel comfortable with testing it there. Let's think about testing it further away from salmon migration path, monitor salmon interactions, then maybe consider moving closer.
- 3.8.5 Ralph: It needs to be within several inches of the wall.
- 3.8.6 Chuck: Discussion on placement will continue.

4 NWW Topics for FFDRWG Update/Review/Coordination

- 4.1 NWW MNA Turbine Replacement Design – Jean Desjarlais (PM), Jon Renholds (TL)
 - 4.1.1 Nothing to update this month. We will re-visit at next FFDRWG meeting.
- 4.2 NWW IHR Turbine Cooling Water Exclusion - Karen Zelch (PM), Chuck Barnes (Bio)
 - 4.2.1 Chuck: Install is scheduled for the end of the month. Full inspection performed by fish bio will occur prior to install.
- 4.3 NWW LLA Adult Ladder Turn Pool Gate - Greg Linklater (PM), Chuck Barnes (Bio)
 - 4.3.1 Chuck: Parts have been ordered and received install is scheduled for this winter.
- 4.4 NWW MCN Avian deterrence – Karen Zelch (PM), Ryan Ashcraft (Bio)
 - 4.4.1 Ryan: AE contract awarded in late September to Jacobs for SDR effort. AE and USACE team kicked off the project and conducted initial site visit at McNary October 23.
- 4.5 NWW John Day Dam and Snake River Ladder Cooling – Karen Zelch (PM), Ryan Ashcraft (FFDRWG)
 - 4.5.1 Ryan: John Day South shore ladder. McNary South shore ladder. Ice Harbor South shore ladder. Lower Monumental North shore ladder. AE contract awarded for SDR (system design review) effort in late September to Jacobs and kick off took place in October 2024. Site visits with the AE and USACE PDT scheduled for Dec 10 and 11.
- 4.6 NWW MNA PIT Detection – Karen Zelch (PM), **Chuck Barnes (FFDRWG)**
 - 4.6.1 Chuck Presentation.
 - 4.6.2 #1
 - 4.6.2.1 Trevor: What would it be made of?
 - 4.6.2.2 Gabriel: We didn't get that far in the design quite yet.
 - 4.6.2.3 Trevor: How much would it reduce the flow?
 - 4.6.2.4 Travis: We deemed any flow reduction unacceptable.
 - 4.6.3 #2
 - 4.6.3.1 Michael: Is this for one spillway?
 - 4.6.3.2 Chuck: For one TSW.
 - 4.6.4 #3
 - 4.6.5 #4
 - 4.6.5.1 Trevor: Would have to cut the rebar out and replace with fiberglass.
 - 4.6.5.2 Gabriel: There is no place to store 3001 readers, so we are looking into using 1001 readers.
 - 4.6.5.3 Trevor: We should find a way to have the larger readers.
 - 4.6.5.4 Gabriel: We have searched McNary and there is no way to store the equipment for the 3001 readers. The location of the TSW is not close enough to the tailrace deck.
 - 4.6.5.5 Trevor: How much reduction in read range is there between the two?
 - 4.6.5.6 Gabriel: 30%-40%.
 - 4.6.5.7 Erick Van Dyke: How heavy is the equipment?
 - 4.6.5.8 Gabriel: It is not necessarily about the weight as much as climate control and maintenance access.

4.6.6 #5

- 4.6.6.1 Gabriel: The exact details for these alternatives have not been figured out this early in the planning phase.
- 4.6.6.2 Erick Van Dyke: Did you use a template for what you are looking for?
- 4.6.6.3 Gabriel: That will be developed as we decide on which concepts we believe will work.

4.6.7 #6

- 4.6.7.1 Trevor: Looks like this would have the highest detection rate.
- 4.6.7.2 Gordon: Yes but would have to be in bay 22.
- 4.6.7.3 Trevor: Did we have a TSW in 22 during a study?
- 4.6.7.4 Chuck: I believe so, I will dig up some data.
- 4.6.7.5 Gabriel: This design has huge direct water impact on the surface of the readers.
- 4.6.7.6 Trevor: Have you seen any damage to the readers used at Lower Granite?
- 4.6.7.7 Gabriel: No damage, but we haven't accessed them.
- 4.6.7.8 Erick Van Dyke: Why does it have to be in this location?
- 4.6.7.9 Gabriel: We can house the equipment close by on the tailrace deck.
- 4.6.7.10 Erick Van Dyke: Are there any concerns with the guide walls?
- 4.6.7.11 Chuck: Potentially yes because I do believe we see lower survival.
- 4.6.7.12 Erick Van Dyke: Stranding fish on the tailrace deck due to splashing water has also been a concern in the past.
- 4.6.7.13 Gabriel: We can avoid that with extending the wall on the deck.
- 4.6.7.14 Trevor: In 2007 the TSW was in bay 22, it showed lower survival than when it was in bays 19 or 20.
- 4.6.7.15 Chuck: We will also have more info when we get the acoustic data.

4.6.8 #7

- 4.6.8.1 Erick Van Dyke: We have not seen these concepts before therefore cannot provide you comments.
- 4.6.8.2 Chuck: You will have more time to digest these concepts and provide comments. This is the initial introduction to these concepts.

4.6.9 #8

- 4.6.9.1 Dave Swank: Could you speak to the vibrations?
- 4.6.9.2 Gabriel: High flow and turbulence create high vibration which lowers detection. This would need to be in calm water.
- 4.6.9.3 Erick Van Dyke: What about other locations in the tailrace?
- 4.6.9.4 Gabriel: I haven't seen McNary during spill so I can't answer to placement locations there.
- 4.6.9.5 Trevor: I understand it cannot be placed upstream of the project. I still don't think we should remove it from total consideration. This way we have potential to detect tags in addition to other methods.
- 4.6.9.6 Gabriel: Would it have to be outside the BRZ?
- 4.6.9.7 Trevor: Yes, it would have to be.
- 4.6.9.8 Gabriel: Yes, the barge still has potential.
- 4.6.9.9 Trevor: I don't think we should remove from consideration.
- 4.6.9.10 Chuck: It is not removed from the list, just will not be the primary detection source.
- 4.6.9.11 Karen: This would also have high potential to be taken out by large debris.
- 4.6.9.12 Trevor: the new design is capable of handling large debris loads.
- 4.6.9.13 Gabriel: Again, potential, just not sole source of detection.

4.6.10 #9

- 4.6.10.1 Trevor: Is the run too long to have the equipment all the way out there?
- 4.6.10.2 Ralph: Could you place the equipment on the downstream side?
- 4.6.10.3 Gabriel: Yes, that is what the design would be.
- 4.6.10.4 Trevor: Would this work with the 1001 readers?
- 4.6.10.5 Gabriel: That would mean we are only sampling and even smaller portion of the river. This should be removed from primary detection concept, but maybe has potential as an additional source?
- 4.6.10.6 Ralph: Could you set two readers side by side?
- 4.6.10.7 Gabriel: No, you cannot operate two 1001 readers side by side.

4.6.11 #10

4.6.12 #11

4.6.12.1 Michael: Would this cause issues for sturgeon?

4.6.12.2 Chuck: The openings are very large; sturgeon should have no problem if one decided to pass.

4.6.12.3 Trevor: Would the structure be capable of handling large debris loads and many cleaning efforts? Would this create a problem with fish avoidance?

4.6.12.4 Chuck: We also noted the potential fish avoidance.

4.6.12.5 Gabriel: Wells dam has a similar design in place. This design would probably require 5'x20' openings made of stainless.

4.6.12.6 Trevor: I think we should continue to look at this concept.

4.6.12.7 Gordon: 1001 readers would be built into the rack, so potential for easy access for maintenance with removal capabilities.

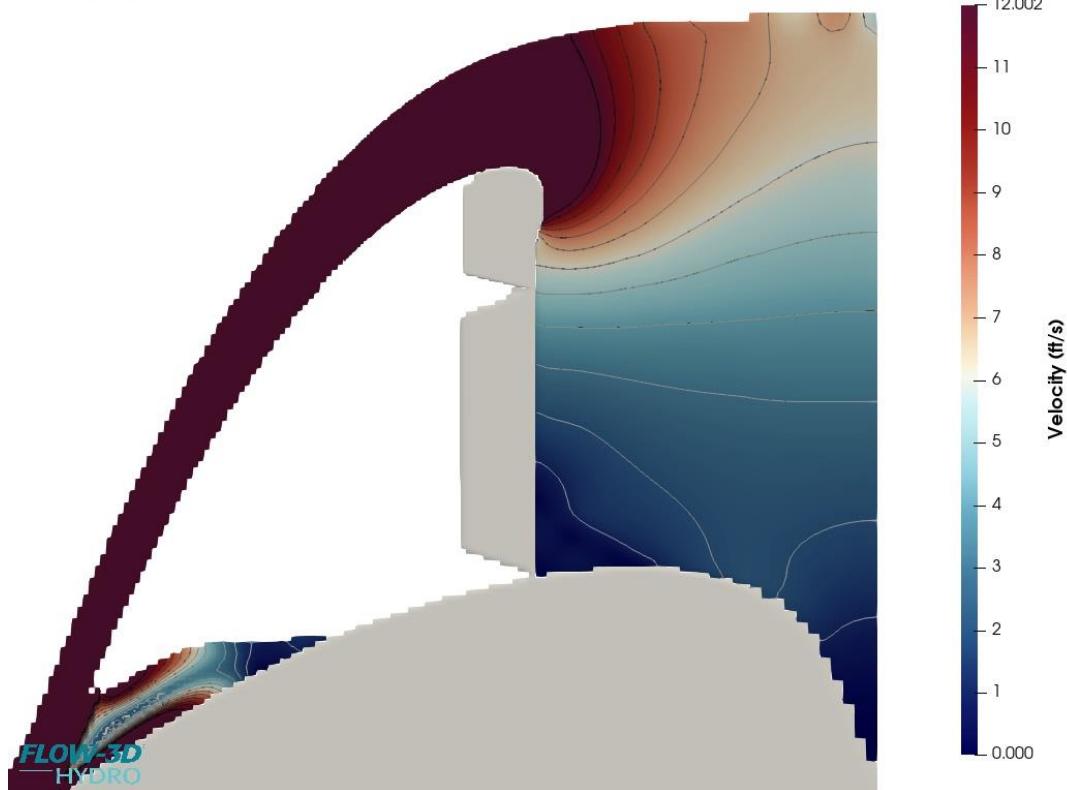
4.6.12.8 Trevor: Will have to look closer at the avoidance issue.

4.6.12.9 Chuck: Agree, create a study once the build is completed?

4.6.12.10 Trevor: It would be unfortunate if we build it and find out fish avoid it then be forced to remove it. We should investigate Wells, see if they have any avoidance data. Need to be sure if it is avoidance or delay.

4.6.12.11 Chuck: Question for Ryan L. What is the water velocity at the rack's location?

Time: 9.000



NWW Hydraulics is working on a more detailed velocity profile with the upstream slot location on the graph but it appears the velocity where the trash rack would go would be < 7 ft/sec.

4.6.12.12 Erick Van Dyke: Concerns for fish strikes, would be adding additional rack into the water.

4.6.12.13 Trevor: This wouldn't be as extreme as gate openings, but still a valid concern.

4.6.13 #12

4.6.13.1 Trevor: How about the trash rack concept with the embedded TSW concept? That would provide a high rate of detection.

4.6.13.2 Chuck: Yes, we will continue to look into that.

4.6.14 McNary PIT presentation wrap-up

- 4.6.14.1 Chuck: Will continue to update the group on this topic.
- 4.6.14.2 Karen: We are doing our best to be transparent/collaborative and flexible throughout this process. Does anyone have input on when we should ask for comments by?
- 4.6.14.3 Erick Van Dyke: I am looking forward to understanding how long this conversation will continue with only developing 5%.
- 4.6.14.4 Karen: Our plan is to have a recommendation by October 2025 for design and build.
- 4.6.14.5 Chuck: If anyone has ideas, please send them over. We are still very early in the process, just looking for the best solution. No decisions have been made, so any and all ideas are welcome.

5 FFDRWG round table discussion about expectations/norms

5.1 Tabled until December FFDRWG.

6 Upcoming meetings and field trips

6.1 Next regularly scheduled NWW/NWP FFDRWG meeting – Thursday, December 5th @ 09:00

- 6.1.1 Cancel or reschedule because SRWG/AFEP is on the 3rd?
- 6.1.2 Do a field trip to a dewatered ladder in December instead?

6.2 SRWG/AFEP Annual Review – Tuesday, December 3rd

- 6.2.1 Columbia Gorge Discovery Center, The Dalles

7 Gabriel: Update on PIT R&D Process Presentation.

8 Adjourn.