

# Lower Columbia River Fish Facility Design Review Work Group (FFDRWG) USACE, Portland District



## February 2022 DRAFT Meeting Notes

February 3, 2022 09:00-11:00

### FFDRWG meeting Files

<http://pweb.crohms.org/tmt/documents/FPOM/2010/FFDRWG/FFDRWG.html>

### Introductions

FFDRWG members:

#### BPA

**Scott Bettin**

Kim Johnson

Siena Lopez-Johnston

**Christine Petersen**

Greg Smith

**Leah Sullivan**

**Ben Hausmann**

#### NOAA

**Blane Bellerud**

**Gabriel Brooks**

**Trevor Conder**

**Kinsey Frick**

Claire McGrath

Josie Thompson

Logan Negherbon

#### USFWS

**Dave Swank**

#### States

**Erick Van Dyke (ODFW)**

**Charles Morrill (WDFW)**

Jonathan Ebel (IDFG)

#### CRITFC/Tribes

**Tom Lorz (CRITFC)**

Blaine Parker (CRITFC)

Tom Skiles (CRITFC)

**Laurie Porter (CRITFC)**

**Greg Silver (CRITFC)**

Casey Baldwin (CTCR)

Michael Karnosh (CTGR)

Lawrence Schwabe (CTGR)

Torey Wakeland (CTGR)

Aaron Jackson (CTUIR)

Ralph Lampman (YN)

#### NPCC

Leslie Bach

Kris Homel

#### FPC

**Erin Cooper**

#### PSMEC

**Alan Brower**

Darren Chase

Roger Clark

Mark Leonard

Scott Livingston

Nicole Tancreto

Don Warf

#### CENWD

**Doug Baus**

Tim Dykstra

Dan Feil

Mike Langeslay

**Cindy Studebaker**

**Lisa Wright**

#### CENWW

Karl Anderson

Chris Peery

Steve Juhnke

Denise Griffith

Kenneth Fone

Bobby Johnson

#### CENWP-OD

**Andrew Derugin**

Rebecca Cates

**Jeanette Wendler**

**Tucker Gossett**

**Bob Cordie**

**Jeffrey Randall**

Scott Fielding

Eric Grosvenor

Michael Lotspeich

Laura Rickets

**Tammy Mackey**

**Darren Gallion**

**Nathan McClain**

Robert Wertheimer

Karrie Gibbons

#### CENWP-PM

Jim Adams

**Michael Carl**

Ian Chane

Jeff Hicks

Steve Sipe

**Jeremiah Woodard**

Erin Kovalchuk

Mark Bierman

Brad Eppard

David Griffith

Fenton Khan

Rachel Laird

**Jake Macdonald**

Rich Paskowski

**Jon Rerecich**

Ida Royer

David Trachtenberg

#### CENWP-ENC

**Adam White**

Brandt Bannister

Bridget Bell

**Shari Dunlop**

Curtis Lipski

**Chris Motti**

**Steve Schlenker**

**Max Wilson-Fey**

Mehdi Roshani

**Collin Porter**

Dan Penn



FFDRWG field trip to Bonneville Bradford Island Ladder on January 13th

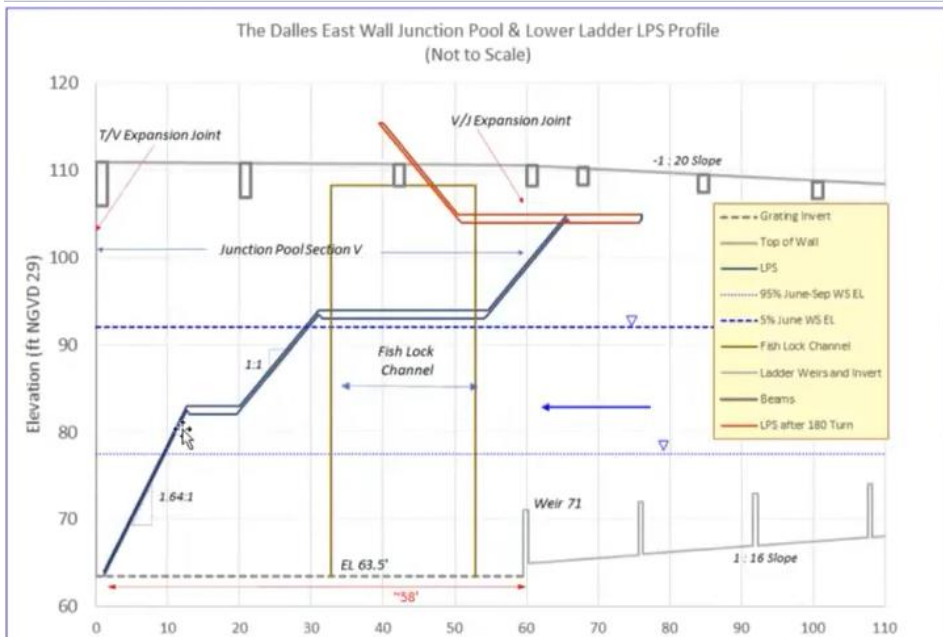
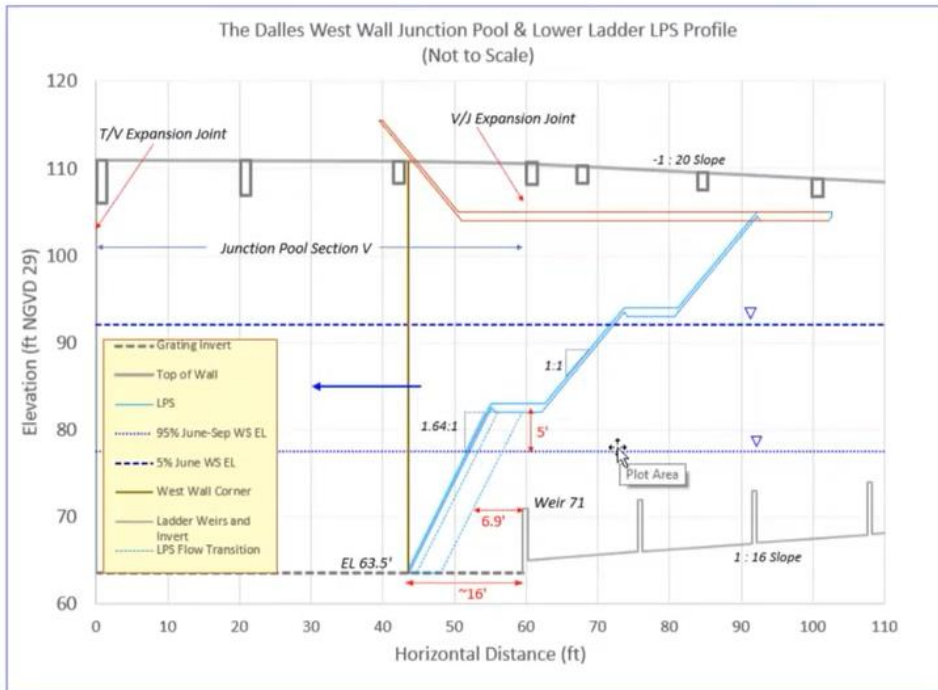
### Action items from previous meetings

- ☐ Corps will present The Dalles backup AWS debris management alternatives at an upcoming FFDRWG
  - o EDR shelved at 50% with no funding in FY 22. The Corps will walk through alternatives with FFDRWG at 60% (when the project resumes)

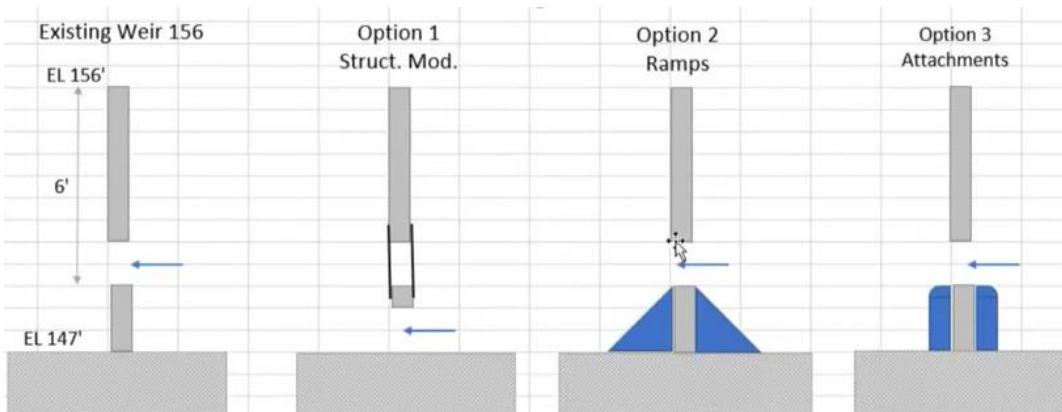
- ❑ Ladder cooling at John Day (added by Conder)
  - Eric Grosvenor has downloaded data from ladder temperature probes and will review the data with FPOM next week. After reviewing that data and identifying a problem:
    - FPOM will first look for an operational solution.
    - If we're ready to go straight to an engineered solution, FFDRWG will inform the design.
    - If we decide more research is needed, we'll coordinate that with SRWG.

### **Topics for FFDRWG Discussion/Review/Coordination**

1. JDA adult lamprey passage improvements – Michael Carl (PM), Adam White (TL), Eric Grosvenor (FC)
  - a. North Fish Ladder LPS 60% Design Documentation Report (DDR) overview – **White**
    - Proceeding with the gravity fed supply from the count station diffuser drain.
    - Will provide a larger collection tank and reuse the existing upwelling box (discussed in 60% DDR).
    - Rounded cap for the south ladder entrance weir.
  - b. FFDRWG review schedule – **Macdonald**
    - ACTION: Macdonald/Mackey will upload a copy of the 60% JDA Lamprey passage DDR to the FFDRWG meeting files website
    - Please review for red flag items that can't wait for 90% review (~April 2022)
  - c. South Fish Ladder lamprey collection and counting structure improvements – **Grosvenor**
    - Eric is unavailable today, will provide an update and answer any questions at FPOM
  - d. South Fish Ladder entrance weir – **Grosvenor**
    - Eric is unavailable today, will provide an update and answer any questions at FPOM
2. TDA adult lamprey passage improvements – Michael Carl (PM), Adam White (TL), Jake Macdonald (FC)
  - a. 60% Design Documentation Report (DDR) overview – **White**
    - LPS alignment – **Schlenker**
      - See TDA-Junction Pool Plan.doc (upload to FFDRWG meeting files website)
      - Plan view shows 2 ramps, a long traversing section LPS flow deflector 7' downstream of the first weir
      - Steep climbing ramps at the bottom, but usually underwater with only a 5' climb at the lowest tailwater elevations
      - from Kinsey Frick to everyone: I feel okay with the climbing and traversing designs. The location of the entrance/access is key. Are lamprey milling or using the entrance locations heavily?



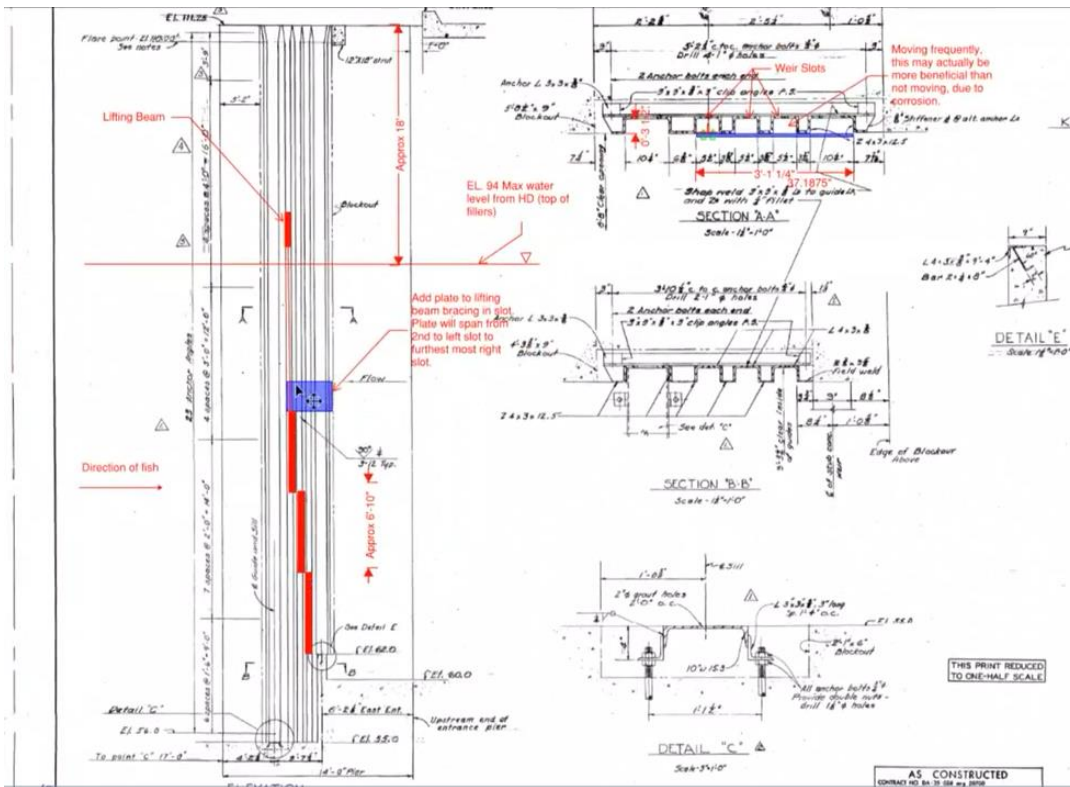
- Control section weir orifice modification – **Schlenker/Motti**
  - Tom/Trevor/Kinsey/Steve – Okay with all options but option 1 is best





- Entrance slot covers – Porter

- Weight capacity of the lifting machinery may prevent us from installing covers from the weir crest to the water surface. FFDRWG (Kinsey Frick, Laurie Porter, Tom Lorz) recommends we put them at the weir crest and extend them as high as possible, within weight limits. Lamprey are more likely to approach the high velocity entrances from below, not so much at the surface.

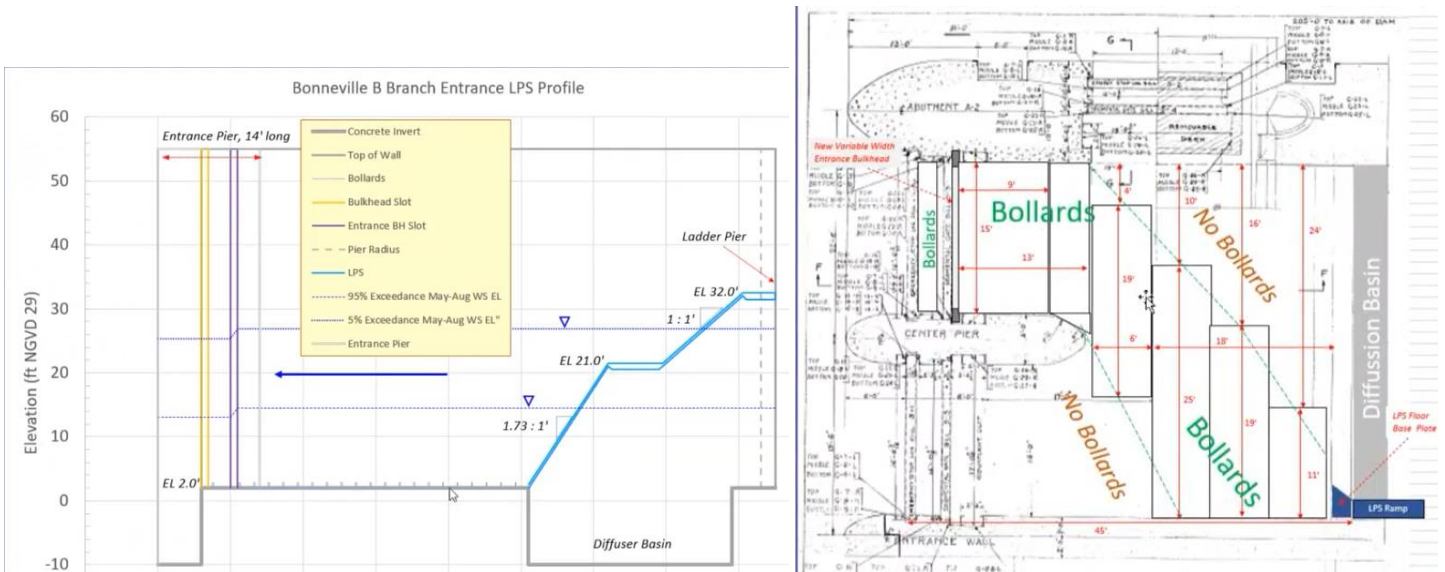


b. FFDRWG review schedule – Macdonald

- ACTION: Macdonald/Mackey will upload a copy of the 60% TDA Lamprey passage DDR to the FFDRWG meeting files website**
- Please review for red flag items that can't wait for 90% review (~May 2022)

3. BON1 adult lamprey passage improvements – Michael Carl (PM), Adam White (TL), Andrew Derugin (FC)

a. B-Branch entrance improvements 90% Design Documentation Report (DDR) overview – White



b. FFDRWG review schedule – Macdonald

- ACTION: Macdonald/Mackey will upload a copy of the 90% BON1 Lamprey passage DDR to the FFDRWG meeting files website and Macdonald will initiate a formal FFDRWG review period in March 2022)

c. Elevated orifices in B-Branch – **Derugin**

- BON staff are grinding the downstream lips of low-rise orifices, turning them into rounded ramps.
- The work shown in the photo represents “a few minutes” of work
- More grinding to be done to make it a smoother transition but so far it’s a promising proof of concept.



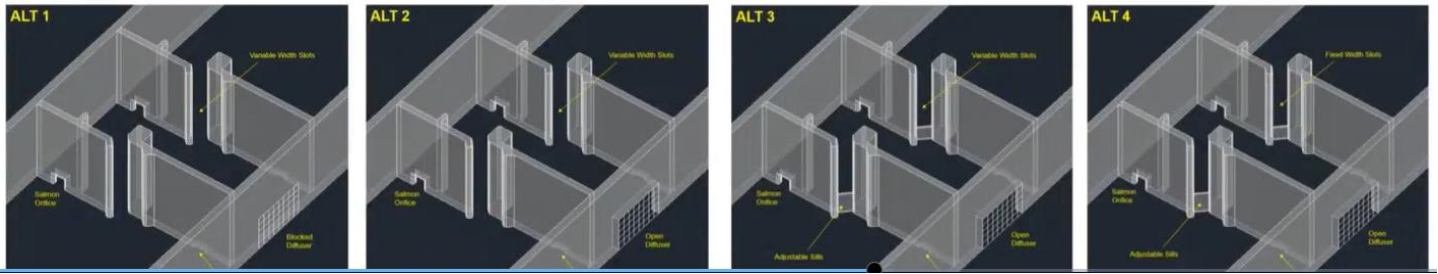
d. Extensive minor modifications to serpentine weirs – **Derugin/Macdonald**

- Lamprey orifices this year, more modifications in 2023-2024.

4. BON2 adult lamprey passage improvements – Michael Carl (PM), Shari Dunlop (TL), Andrew Derugin (FC)

a. 30% Design Documentation Report (DDR) overview – **Dunlop**

- See 20220203\_FFDRWG Update\_WA Shore Control Section.pptx (upload to FFDRWG meeting files website)
- Alternative 1 blocks off bleed-off diffusers and includes mods to the count station/pickets to bleed off that water
- Alternative 2 (preferred) leaves the bleed-off diffusers and count station/pickets alone
- Alternatives 3 and 4 include sills at the bottom of the slots that aren’t needed and could be an impediment to lamprey passage
- FBL stands for Forebay Level (in feet above mean sea level)
- from Stephen Schlenker to everyone: We might need to adjust some of the bleed off orifices [with alternative 2].
- Trevor Conder (NOAA) reminded the PDT that the construction schedule needs to stick to the in-water work window, even if it means constructing over two years.



b. Does FFDRWG want to review the 30% report, or wait until 60%? – **Macdonald**

- **ACTION: Macdonald will upload a copy of the 30% BON2 DDR to the FFDRWG meeting files website so it's available for FFDRWG to review and show to others (Lorz)**
- Please review for red flag items that can't wait for 60% or 90% review

5. BON2 FGE – Jim Adams (PM), Bridget Bell (TL), Jon Rerecich (FC)

a. Coordinate spring 2022 hydraulic testing with FFDRWG/FPOM – **Rerecich**

- Contractor is mobilizing equipment
- PDT is back online, meeting this Monday
- Installing pressure sensors in unit 14 and 15; gatewell velocities in unit 15 one bay at a time
- Testing will occur May-June (most certainty of upper 1% flows)
- An FPOM MOC coordinating unit outages for installation and removal of equipment is coming soon
- Bettin: Can the equipment wait until Fall to come out or will it be removed immediately? Wilson-Fey: It's my understanding that both the pressure and velocity measurement equipment will be removed immediately after testing. It would be unwise to leave the equipment in the gatewell as extended exposure to flows could damage equipment or knock it loose and send it through the turbine. The velocity equipment can simply be lifted up out of the gatewell water column but retrieval of the pressure equipment will require a unit dewater. Jon or I will still clarify that at Monday's PDT meeting. **ACTION: Jon Rerecich or Max Wilson-Fey will follow up with FFDRWG on whether the testing equipment will come out immediately or wait until Fall after Monday's PDT meeting.**
- Lorz: If testing goes well, will all corbels be done before the 2024 season? Rerecich: Yes, that's the plan.
- Lisa Wright nominated Doug Baus to issue the TTY for this. Doug said he's had it drafted for 4 years, it's ready to go.

6. Spillway survival at BON (added by Lorz) –

- a. Lorz: Is the Corps tracking this BiOp requirement?
- b. Conder: It may not be a FFDRWG specific topic yet. We need to go through the current information and come up with a study.
- c. **ACTION: Macdonald will consult with Cindy Studebaker (and the BiOp) prior to the 16-Feb SRWG meeting and we can continue discussing research needs at the Bonneville spillway at that meeting.**

7. Cascades Island subsidence (added by Morrill).

- a. Morrill: Should the fish passage community be tracking?
- b. **ACTION: Macdonald/Eppard/Mackey will find out if Cascades Island subsidence has a potential to affect fish passage and make sure the project is coordinated in the appropriate forum.**

## Written project updates

1. JDA turbine rehab – Steve Sipe (PM), Curtis Lipski (TL), Jon Rerecich (FC)
2. TDA AWS Debris Management– Erin Kovalchuk (PM), Mehdi Roshani (TL), Eric Grosvenor (FC)
3. BON Second Powerhouse FGE – Jim Adams (PM), Bridget Bell (TL), Jon Rerecich (FC)
4. JDA adult lamprey passage improvements – Michael Carl (PM), Adam White (TL), Eric Grosvenor (FC)
5. TDA adult lamprey passage improvements – Michael Carl (PM), Adam White (TL), Jake Macdonald (FC)
6. BON1 adult lamprey passage improvements – Michael Carl (PM), Adam White (TL), Andrew Derugin (FC)
7. BON2 adult lamprey passage improvements – Michael Carl (PM), Shari Dunlop (TL), Andrew Derugin (FC)