

SUBJECT: Meeting Notes: The Dalles East Fish Ladder Auxiliary Water Supply Backup System

These notes were compiled by Brad Trumbo (NWW) during a conference call held Monday 23 December, 2013 to discuss the current status of the DDR and any concerns over constructability of the design presented by The Corps' Walla Walla District.

Attendees:

Corps: Brad Trumbo, Ryan Laughery (NWW); George Medina, Randy Lee, Sean Tackley, Carolyn Snyder, Matthew Chase (NWP); Bill Proctor (NWD/RCC); Bob Cordie (TDA)

BPA: Scott Bettin, Agnes Lut

NMFS: Gary Fredricks

Meeting opened at 0905

Meeting Goals:

Update on design progress

Discuss Constructability

Discuss the path forward for the design and implementation

George Medina (NWP, Project Manager) provided an overview of design schedule and progress and opened the floor for discussion or voicing of concerns.

Gary Fredricks began discussion by voicing concerns over confusing information from various regional entities regarding the constructability of the design. Ryan Laughery responded with technical summary to bring everyone up to speed with the design.

DDR:

90% DDR due to NWP by 10 January, 2014

DDR completed 14 March, 2014 (includes 30% design at this stage)

Design Process:

Value Engineering study this past fall gave Walla Walla team a chance to step back and take a broad look at the 60% design. A new alternative design was created that improved upon the 60% design and was carried forward.

Current design characteristics:

10' bore through the dam west of the east fish ladder exit

5' piers on dam face with fine trash rack and bulkhead to seal off the intake

Pipe exiting the dam monolith on the tailrace side near ground elevation

Pipe will run subsurface from dam to the east fish ladder

Pipe will split into two 7.5' pipes and punch through the east fish ladder

Pipes will then terminate in the auxiliary water supply diffuser chamber

Meeting held 19 December with NWP dive safety. We walked through the approach for installation of a coffer dam on the forebay side to complete the bore through the dam and install the intake structure and bulkhead.

Guides will be anchored along the dam face by divers. These guides will allow sections of the coffer dam to be lowered from the forebay deck.

Concrete anchorage into the face of the monolith above the water line can be applied to the coffer dam during installation to relieve buoyancy forces and reduce dive time.

NWW is currently working with NWP dive safety to define the forebay environment to install the guides for the coffer dam, but it currently appears to be something that can be done. Visual observation of conditions occurred 10 December (NWW team) and noted stagnant and upstream flow conditions at the intake site. Powerhouse only was in operation at the time with the river discharge approximately 155-165 kcfs (approximately average winter river conditions).

NWP dive safety team is to explore the dam face with an ROV. The ROV performance relative to river velocity in the vicinity of the proposed intake structure will provide evidence of conditions for divers. Basically, if the ROV can work in that area, a diver can as well.

ADCP data collection will occur at The Dalles very soon to inform of river conditions.

The coffer dam will take approximately 2 weeks to install and will remain in place until the following in-water work window (a little over a year).

At this time, no special operations are being speculated or discussed.

Design Summary: All is going as planned to date. NWW and NWP both believe the process is on schedule and construction can be accomplished. There are still some unknowns with forebay conditions and dive safety that will be addressed. Estimated cost is still under \$15mil.

Scott Bettin voiced concern about the possibility of a zero flow requirement to install this coffer dam, etc., recalling the recent Bonneville lamprey flume issues. Zero flow at The Dalles is not an option. At this point we (the Corps) are not expecting any emergency or special operations of this magnitude to be required.

Sean Tackley recommended that Ryan Laughery send out a schedule for the DDR and upcoming plans and specs, etc. He also encouraged dive safety to be conservative with forebay measurements to ensure that we don't find ourselves in a similar situation as the Bonneville lamprey flume install.

A questions was asked, "where does dam safety stand with this project so far?"

Matthew Chase responded :

Three concerns are failure of the 10' conduit itself, dam monolith stability, and the potential for uncontrolled release of the pool (e. g. during boring a failure of some sort would cause water from the forebay to drain through the bore site). The design includes a bulkhead to seal the intake and butterfly valve downstream of the intake as redundant pipe closure. Monolith stability is unlikely to be an issue but still a concern during boring.

Gary Fredricks question to Scott Bettin:

Is there a contingency plan in place to provide a special operation for this project in case something happens?

Scott replied that currently there is no contingency plan. We cannot go to zero flow and it will be extremely difficult to adjust operations to make this work if necessary.

How comfortable is BPA in working on an alternative operation?

BPA is very sensitive to this and extremely cautious, but willing to work with the Corps as much as possible.

Bill Proctor echoed BPA on this.

Power generation is necessary. It may be possible to operate the west end of the powerhouse only.

Ryan Laughery pointed out that current powerhouse conditions that divers experience while installing or removing research equipment applies to the proposed ASW intake location.

George Medina summarized by saying that we are still on schedule and will continue as planned. We (the Corps and NMFS) do not expect any issues with the construction of the design.

Once data are available, NWW will provide a synopsis of the ROV and ADCP data with dive safety input. This information is targeted for the DDR; however, a write-up will be provided to the Region even if out of sync with the DDR schedule.

Meeting adjourned approximately 0945