

BROWNSVILLE DAM PROJECT UPDATE

Prepared by: Denise Hoffert-Hay, Project Manager

Prepared for: Calapooia Watershed Council May 2007 monthly meeting

Questions? Please call or email Denise at: (541) 619-5896 or hofferthay@peak.org

Technical Team Meeting – 60% Design Meeting

The Council's Technical Team was with Cascade Earth Sciences (CES) on Friday, April 20th from 10 am to noon at CES headquarters in Albany on Pacific Blvd. Many members of the Team also attended a field visit out to the dam. Technical Team members provided input on the 60% design prepared by CES. Three alternatives for removing the dam were presented. The Team discussed the merits and drawbacks of each. Also discussed was the diversion design and permitting updates.

Team members in attendance:

Bud Baumgartner (Council Chair)	Bob Danehy (Council Steering Committee)
Tim Otis (Council Vice Chair)	Denise Hoffert-Hay (Project Manager)
Tara Putney (Council Coordinator),	Jan Stuart (US Army Corps of Engineers)
Bill Sattler (City of Brownsville)	Susan Novak (NOAA/NMFS)
Mike Lambert (OR Dept Fish and Wildlife)	Steve Mamoyac (OR Dept Fish and Wildlife)
Joel Watts (OR Dept Fish and Wildlife)	Jared Rubin (OR Dept Environmental Quality)
Desiree Tullos (OR State University)	Karen Hans (OR Dept Fish and Wildlife)
Karen Strohmeyer (Cascade Pacific)	

Technical Team members not present but provided feedback: Douglass Fitting, OWEB

CES Staff in Attendance:

John Martin (Project Manager)	Jay Williams (Project Engineer)
Steel Maloney (Company President)	Scott English (Construction Manager)

Permits Update

• **SEF decision** (Denise)

The Regional Sediment Evaluation Team (RSET) evaluated the information the Council provided (Feb 2007) on the stored sediment and watershed conditions upstream of the dam. The RSET determined that NO ADDITIONAL testing would be required. This is significant because evaluating the sediment with chemical testing and sediment coring was going to be time and cost prohibitive to the project moving forward Summer 2007. Key information provided to assist the RSET's decision included: the small amount of stored sediment relative to the background levels, no upstream sources of contamination and small percentage of fines (particle grain size less than 2 mm).

• **DEQ monitoring guidance** (Denise)

OSU and OWEB have been assisting the Council with developing an effectiveness monitoring plan to implement prior to the dam's removal and during the dam's removal. One component of the monitoring plan was to install continuous turbidity meters to capture during removal and winter storm event turbidity levels. The Council was pursuing this monitoring because we

thought it would be a permit condition. After reviewing the proposed strategy, DEQ determined that continuous sampling would not be necessary for this project. To meet permit conditions, readings from a turbidity meter can be used. Additionally, DEQ will likely allow the project to exceed the turbidity standard for some set amount of time during the actual dam removal.

• **SHPO update (Denise)**

Project description and location were provided to the State Historic Preservation Office in March 2007 for archaeological review. SHPO responded that the project site needed an archaeological investigation given that the dam location is in an area with significant cultural resources. The Council contracted with a local archaeologist, Clay Lebow of Applied Earthworks (who came highly recommended by the City of Albany and the NRCS) in April 2007. Lebow conducted an archaeological site investigation and did not find any Kalapuyan artifacts. However, during his research on the site, he uncovered information on the Brownsville Canal documenting its historic significance. Since the Canal is eligible for inclusion the National Register of Historic Places, construction equipment at the site has to take additional precautions so the canal is not damaged. We are waiting for SHPO guidance on how the pump can be installed since it requires digging into the bottom of the canal to lay the water diversion pipe. A final SHPO determination will be made upon their receipt of Lebow's site report and the Section 106 paperwork Denise and CES will put together on the proposed diversion.

• **SLOPES update (Denise/Susan Novak/Jan Stuart)**

Standard Local Operating Procedures for Endangered Species (SLOPES) is a document that NOAA fisheries wrote to cover ESA consultation for certain types of projects. NOAA has been having conversations with USACE for months regarding our project and how it complies with SLOPES. Although NOAA wrote the SLOPES opinion, it is USACE that implements it. In April 2007, a letter went from NOAA to USACE explaining why this project meets the SLOPES guidelines. USACE has not made a final determination at this time about the project fitting under SLOPES.

The reason we want our project to fall under SLOPES consultation is that we avoid having to prepare a Biological Assessment for submission to NOAA and the USACE. Upon receipt of our BA, NOAA would then have to prepare a Biological Opinion. The process of preparing a BA is lengthy and expensive

- **DSL Joint Fill and Removal (John Martin)**
- **1200-C NPDES (John Martin)**
- **401 C Water Quality Certification (John Martin)**
- **Floodplain Permit (John Martin)**
- **Linn County Right of Way (John Martin)**
- **Linn County No Adverse Impact (John Martin)**

The above permits are in the process of being completed for submission in mid-May.

• **Total Organic Carbon Results (John Martin/Steel)**

Total organic carbon results indicate a TOC content of less than 2% for the sediment stored behind the dam.

60% Design Review

Details on the design options presented at the meeting are available in a separate document. (Available upon request electronically or hard copy from Denise at (541) 619-5696 or email: Calapooia@peak.org).

Three Dam Removal Options (and the Tech Team's discussion pros and cons)

1. Clean Water Bypass and Pushup Berm

Construct a full-spanning coffer dam. Completely de-water the work site. Divert flow into the canal and then back to the River either thru a pipe or a constructed channel across the flood terrace.

Concerns

- Tremendous amount of fish salvage would be necessary to rescue the lamprey that would be exposed.
- Clean water bypass and how the River's flows would be handled if we experienced a storm event, etc.
- Amount of pumping necessary to remove the water that will seep into the work area.
- Disturbance of the stable point bar to create the diversion (coffer) dam. Riverine materials would be used and this gravel bar is very armored right now. Digging into it to build the diversion dam has the potential to create increased erosion following the dam's removal.

2. Two Step Dam Removal without Clean Water Bypass

Remove the dam in two steps without a clean water bypass. The first section of the dam to be removed would be from the parking lot side (north abutment). A small (10 to 20 foot) section would be removed slowly enough to allow the water level to come down and not strand any lamprey. The flow would not be diverted, so equipment would be working directly in the River. As soon as the south side of the channel was dewatered (since the north side would now have a low spot, the south side will have no flow) the dam removal would commence on the south side. Turbidity curtain would be in place to collect debris from the construction process.

Pros

- Least expensive and quickest way to remove the dam
- Least disturbance of the channel and stored gravels
- Fish-friendliest approach
- No disturbance to the canal - no clean-water bypass

Concerns

- Turbidity from concrete rubble-izing during deconstruction. (Concrete dust and debris entering the river)

3. Two Step Dam Removal with Work Zones Dewatered

Remove the dam as above, only reverse the directions. A 10 to 20 foot chunk of dam would be removed from the south side, diverting flow this direction. Once the north side is dewatered, remove the dam from the north side. Each work zone would be dewatered using ecoblocks.

Access issues would be the same as above.

Pros

- Dewatered work area

Concerns

- Increased costs for set-up and take down to install and move ecoblocks. Increases total length of time equipment in the River.
- Requires multiple fish rescues (each side that is dewatered)
- Requires pumping to maintain a dry work area

Team determined that Option 2 provides the best solution for removing the dam. Consensus decision from the Team was to move forward to 100% design with Option 2. The improvement on the design to be made was to include moving the turbidity curtains to block only each side of the River as that side is being removed – rather than have a channel spanning curtain installed the entire time of construction (to provide downstream fish passage at all times during the project).

Team adjourned after viewing the pump design and determined it would need further refinement before discussing it with the Technical Team.

Several members of the team went out to the Dam to discuss permit issues with Jan Stuart. Discussion about the site potentially having wetlands downstream of the dam on the flood terrace will need to be resolved prior to submitting permits.

Kerry Griffin from the NOAA Restoration Center arrived at the dam (he was not in attendance at the 60% design meeting). He explained that the Council is a potential recipient of funding from Open Rivers Initiative (a grant that Denise wrote in 2005). NOAA has been trying to get funding into this program for almost a year and is really close to being able to partially fund the dam removal project. If that were to happen, NOAA Restoration Center would be the federal nexus for the permitting issues. USACE would still issue the permit, but NOAA has a programmatic consultation for small dam removals that the project would fit into – so the SLOPES issue would become moot. Kerry is hopeful to have news for us on funding within a month.

Still no determination of whether the project can go to construction in 2007. We will have permits ready to submit in mid-May. If the diversion does not hold up the permits, we should be able to go to construction in August 2007. However, there are many unresolved issues with the pump location.

Other Updates

These updates were not part of the Technical Team meeting on 4/20/07. These are issues that have been raised since that meeting.

Brownville Canal water rights

CES conducted a water rights investigation for the canal's water rights. It turns out the City of Brownsville and Canal Company do not have certificated water rights. This is problematic

because in order to install the pump station, we need to file a Point of Diversion change with the Oregon Water Resources Department. Before that can be done, both the City's and Canal Company's permit applications have to be completed by a Certified Water Rights Examiner and approved by OWRD. This will cost a few thousand dollars and take some time. Michael Mattick is working with Denise and John Martin (CES) to develop a few options for how to get this done in the fastest way. The other small water rights holders along the canal (there are 6 small water rights) all have official water rights with certificates. However, their water rights also need a POD transfer. Their rights need to move the POD from the canal to the River and the new pump station location. They can all be bundled into one POD transfer application to WRD. John Martin is working on a cost estimate for each of these 3 groups (City, Canal Company, 6 water rights holders) and should have something for me by next week (May 14, 2007).

Pump Station Location

A lot of discussion and processing has gone on between the meeting on April 20th and now (May 8, 2007) to determine the best location for the pump station. Criteria for the location include:

- Inlet for the pump station must be in the water during low flow conditions. Summer low flows in the Calapooia are so low, this may require the placement of instream structure to deflect water to the intake. (NOTE: Once the River drops below 20 cfs, there is an instream water right senior to the City's water right and the canal is shut off).
- Location must have scouring flows.
- Location must be serviceable by the City. The City will be installing and removing screen, pump, servicing the pump, etc.
- Pump station needs to be as vandal proof as possible.
- New location must work with the water rights.
- New location must be permit-able.

Two locations were evaluated for their potential to serve as the new intake site.

LOCATION 1:

Just above the dam on the north side there is a deep pool right off the parking lot. The location above the dam will not work for the intake. The bottom of the pool is on bedrock. The installation of the pump would require excavating bedrock in order to lay the pipe. Additionally, the pump house would need to be excavated to the level of the pipe. In conversations with NOAA Fisheries, they indicated they would not permit this option. They do not want us to disturb bedrock to create this intake.

LOCATION 2:

The other is just below the dam also on the north side of the River. This option comes with its' own set of concerns – but they are more manageable. The pump house would be installed at a location that DSL is concerned may be wetlands. Therefore, we are working to determine how to mitigate for this impact (see discussion below). There are also impacts to the historic canal and digging thru the bank to install the pipe (See SHPO discussion below). This site however offers the best location to meet the design criteria.

Wetlands

Douglass Fitting and Ken Bierly at OWEB are working with Janet Morlan at DSL to determine

how to move forward on the wetlands issues. Hopefully, DSL can do the delineation for this project so that we can move forward with the pump location (downstream of the dam). Janet's initial thoughts are that we ought to just say the location is a wetland (ie not go thru the delineation process) and then say our plan for mitigating the site is to remove the dam and restore fish passage. She thinks that may be the easiest and most cost-effective approach. There is no final word on this yet. I will keep you updated.

SHPO Update

Applied Earthworks out of Albany completed the archaeology survey and I now have the final report (5/08/07). There were no Kalapuyan artifacts on the site. The Brownsville Canal is a historic resource. SHPO is willing to work with the Council to develop a plan for how to mitigate for the construction and pump house installation impacts. The archaeologist's initial assessment that we need to evaluate the site for the National Register of Historic Places was not confirmed by SHPO. Their office said they will work with me to help us move forward without that process. Linear features (such as pioneer trails, historic wagon roads) are commonly evaluated by SHPO. They do not think this will be an issue that holds our project up. As soon as I receive the pump station/location/construction specs from CES, I will write a Section 106 linear features permit and submit our entire SHPO package for their consideration.

Pre-implementation monitoring

Quick update on monitoring. OSU, OWEB and the Council have come to a solution for how to transfer OWEB funds to OSU for the pre-implementation and year 1 effectiveness monitoring of the site. Now, we will begin work on the contract and scope of work. Parameters that will be monitored include: map current erosion and deposition locations, install and survey in bank pins, particle size distribution, aerial photo analysis to predict new channel location, sample macro-invertebrates, total station survey of drawdown at the dam and total station re-survey following the dam's removal. More details on the project monitoring are available upon request.

A **BIG THANK YOU** to all the dedicated members of the Council's Technical Team! We are getting closer..... I still don't know if we are going to construction this year or next – but I truly appreciate all of your assistance in working thru these issues.

THANK YOU THANK YOU THANK YOU THANK YOU THANK YOU THANK YOU
(I truly can't say it enough)