

BROWNSVILLE DAM PROJECT UPDATE

Prepared by: Denise Hoffert-Hay, Project Manager

Prepared for: Calapooia Watershed Council March 2007 monthly meeting

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

Technical Team Meeting – 25% Design Meeting

The Council's Technical Team met with Cascade Earth Sciences (CES) on Wednesday, February 28th from 10 am to noon at CES headquarters in Albany on Pacific Blvd. Technical Team members provided input on the 25% design prepared by CES. The 25% design is planning level with little detail about how the project will be constructed on the ground. Also discussed was the diversion design and pros/cons of the gravity system versus a pump system. All were subject to thorough review and approval by the Council's Technical Team.

Team members in attendance were:

Bud Baumgartner (Council Chair)	Bob Danehy (Council Steering Committee)
Tara Putney (Council Coordinator),	Denise Hoffert-Hay (Project Manager)
Don Ware (City of Brownsville)	Erinn Birmingham (Division of State Lands)
Melissa Jundt (NOAA/NMFS)	Susan Novak (NOAA/NMFS)
Joel Watts (OR Dept Fish and Wildlife)	Steve Mamoyac (OR Dept Fish and Wildlife)
Bob Bostedt (Council member)	Douglass Fitting (OWEB)
Karen Strohmeyer (Cascade Pacific)	

Technical Team members not present but provided written feedback: Desiree Tullos, OSU

CES Staff in Attendance:

John Martin (Project Manager)	Clay Ellestad (Project Engineer)
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Key points of the discussion included:

1. **Flashboards:** Flashboards (installed on dam to retain the water for the fish passage and the diversion) will go up in late May and remain up until early July. No construction can take place until after mid-July to allow the spring chinook the maximum amount of time to pass the dam. Coordination will be needed with the Brownsville Canal Company to get the boards off the dam in mid-July.
2. **Permitting:** Denise submitted the USACE general permit – different from the Joint Fill/Removal permit that will still need to be submitted as soon as we have 60% design. USACE review of this general permit should tell us what sampling needs to be done to meet the Sediment Evaluation Framework Guidelines. Other permits Denise will be submitting in the next 2 weeks include: State Historic Preservation Office, Linn County permits, and FEMA Floodway.
3. **Modeling:** It appears that HEC-RAS will be adequate for hydraulic modeling. CES is contracting survey out to River Design Group (Scott Wright's engineering firm out of Corvallis). Survey will be dependent upon lower water levels and it is still raining. Scott can use GPS survey equipment which is much faster than the standard total station and rod system. So, hopefully, if it stops raining for a few days, the survey can take place

quickly. Denise is meeting with Scott and CES on March 12th to put together the survey plan.

4. **Dam removal design:** The Technical Team did not identify any problems with the 25% design as regards staging and construction. (However, with little detail at the 25% design level, there wasn't much to object to).
5. **Fish salvage:** ODFW will be the lead agency for fish salvage during site dewatering. Council volunteers will be needed to do the fish salvage. This could be a big job – potentially hundreds of fish could be in the pool below the dam.
6. **Stored sediment:** The Team raised some questions about the amount of sediment that will be affected by dam removal. CES estimated 6000 cy, while OSU estimated 12,000 to 60,000 cy. The difference is due to how far upriver you assume the sediment will be affected. CES assumed it would be limited to the bar or around 300 feet. OSU went 500 to 1000 feet which includes a much thicker wedge.
7. **Canal improvement:** Discussed both alternatives – gravity system vs a pump system. Denise led the Tech Team through a brainstorming analysis to look at pros and cons for the two alternatives. That discussion is summarized in the table below:

Table 1. Benefits Analysis for Meeting Brownsville Canal Water Right

Pump alternative to meet 2.5 cfs canal water rights	
<p>Benefits</p> <ul style="list-style-type: none"> - <i>significantly</i> lower installation costs than the gravity system (~\$30,000 vs ~\$175,000) - <i>no easement requirement</i> - pump can be located in the dam removal work site easing permit requirements - lower impact on River flows since it is 2 miles further downstream before the flows are diverted - no concerns over a fish bypass, fish remain in the channel - easier to remove the fish screen and pull the pump for annual maintenance than it is to remove the gravity system intake 	<p>Drawbacks</p> <ul style="list-style-type: none"> - annual electricity cost to run the pump (\$300 per month in present dollars) - service charge for electricity connection/deconnection or else some monthly charge to just have power available at the site even during the months the system not in use
Gravity alternative to meet 2.5 cfs canal water rights	
<p>Benefits</p> <ul style="list-style-type: none"> - lower annual electricity costs (there would be some electricity associated with operating a wiper system to keep the intake clear of debris) - potentially less maintenance 	<p>Drawbacks</p> <ul style="list-style-type: none"> - installation costs much higher (\$175,000 just for pipe and installation and that is assuming no bedrock or boulders would be encountered during installation) - costs for pipe volatile and greatly depend on petroleum prices. Pipe costs could double or worse by the time we go to construction - 8,000 feet of pipe needed for the gravity system to work - 8,000 foot easement needed - easement process with mortgage company

	<p>and a property title change would be required potentially very costly</p> <ul style="list-style-type: none"> - easement required for a road to be built across private property to reach the gravity intake to do routine maintenance - point of diversion permit required by Water Resources Department for each water right associated with the canal, which takes WRD 1-2 years to process, alternately, can pay \$1,200 - \$1,500 per water right to have a private company do the paperwork. (6 or 7 water rights) - trash rack that traps debris coming downstream requires routine clearing and inspection - has costs associated with replacing screen, screen wipers, trash rack and eventually the pipe
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The Technical Team made the recommendation to move forward with designing a pump system. CES is going to explore more options for different types of pumps/installation designs to minimize electricity needed to operate the system.

The City of Brownsville wants to see a write-up from CES with the pros/cons and costs for gravity vs pump for the water right so they can better understand what the options look like. Denise is working with CES to put this together in time for the March 19th City Council meeting.

Monitoring Update

The Council will be contracting with Rand Eads of Rivermetrics to handle the installation of turbidity monitoring equipment for the site. Denise, Rand and Desiree (OSU) will be doing a site visit on March 20th to look at locations to install the equipment to minimize opportunities for vandalism and make collecting the samples do-able during storm events. Two turbidity meters will be installed to automatically collect samples during storm events. The samples will be collected and analyzed by graduate students from Oregon State University.

Turbidity measurements before, during and after the dam removal will be required as part of the permitting process. The Council’s OWEB grant will pay for the monitoring equipment, installation, etc. The equipment will be installed in April 2007 and hopefully it will capture a storm event or two before the dam comes out.

Denise and Tara are working with OSU Professor Desiree Tullos on the pre/post monitoring plan. More details about the monitoring are available upon request. OSU is putting together a large grant proposal for OWEB to review at the May board meeting to fund monitoring at both Brownsville and Sodom dams. Desiree has been working with Denise on the pre-implementation data collection plan and budget for our OWEB grant.

Other Meetings

Denise and Douglass Fitting (OWEB) will be meeting with USACE and NOAA/NMFS the end

of March to discuss project permits and requirements for the biological assessment/biological opinion. This will be the first sit down meeting with the USACE permit liaison for Linn County. Wish me luck!

The Council's Management Committee will be meeting on March 21st at 7 pm at Brownsville City Hall. One of the things that will be discussed in detail are budgets for this project.

Meeting Schedule

The next project meeting date, location, time is April 20th at 10 am at CES headquarters in Albany. The purpose of the meeting will be to review the 60% project design (developed by CES).

Grant Update

Denise worked with the Bureau of Land Management in January to get the grant agreement paperwork completed. The final paperwork was just received by our fiscal agent (to allow us to access the funds) in early March.

The USFS grant agreement is in place.

We are still waiting to have a signed OWEB grant agreement. Denise has been working with Wendy Hudson since last December on a budget and project scope that OWEB can live with. The large OWEB restoration grant is being split into two separate grant agreements: one for monitoring the other for restoration. This has meant a lot of extra paperwork and ironing out work plan and scope between the two grants. We are hopeful to have something ready for signature by March 16th.

Table 2. Funding Sources and availability

Grant Source	Funding Purpose	Award Amount	Date Awarded	Date Available for Expenditures
<i>Bella Vista Foundation</i>	Outreach coordinator, project management, travel, supplies	\$30,000	July 2006	September 2006
<i>Bureau of Land Management</i>	Design, permits, engineering services	\$45,000	September 2006	Funding available, grant agreement in place
<i>Oregon Watershed Enhancement Board</i>	Pre-implementation monitoring, data collection, data analysis, turbidity equipment, project management	\$91,000	September 2006	Grant agreement in place
<i>US Forest Service</i>	Design, permits, engineering services	\$45,000	September 2006	Funding available, grant agreement in place
<i>Oregon Watershed</i>	Project implementation	\$585,000	September 2006	June 2007

<i>Enhancement Board</i>	including: removing dam, restoring river, pump for canal, etc.			(tentative)
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If anyone would like more information about project budgets, timelines, scope of work or any other detailed information about the project, please contact me at:

Denise Hoffert-Hay phone: (541) 619-5896 or email:

hofferthay@peak.org

A **BIG THANK YOU** to all the dedicated members of the Council's Technical Team who have been trading frantic emails with me over permits and schedule, design questions and a myriad of other project issues. (I'm the frantic one – these folks are all calm and collected!) Tim was willing to go out and take pictures of the sediment behind the dam at the drop of a hat. One frantic phone call is all it took. Gracias!

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

Bud Baumgartner
 Douglass Fitting
 Desiree Tullos
 Melissa Jundt
 Tim Otis