

Meeting Summary

Sodom Dam Fish Passage Improvement and Flow Management Project

*Stakeholder Meeting
December 8, 2009 3 pm to 4:30 pm
Pioneer Villa, Halsey, OR*

Prepared by: Denise Hoffert-Hay, Project Manager and Pamela Archer, Program Manager
Prepared for: Project area landowners and Technical Team members, December 2009
Questions? Please call or email Denise at: (541) 619-5896 or hofferthay@peak.org

In attendance:

Bud Baumgartner, Calapooia Watershed Council	Alex Paul, Albany Democrat-Herald
Denise Hoffert-Hay, Calapooia Watershed Council	Gwenda Matlock, Matlock Conifers, LLC
Mark Running, Calapooia Watershed Council	Jon O. Matlock, Matlock Conifers, LLC
Tara Davis, Calapooia Watershed Council	Telly Wirth, Landowner
Liz Vanleeuwen, Linn SWCD	Nate Kropf, Landowner
Kevin Seifert, Linn SWCD	Leisa Kropf, Landowner
Lucyann Vachecln, Linn SWCD	Gerald Schmucker, Landowner
Dennis Wiley, OPRD	Ron Schmucker, Landowner
Julie Whalen, OPRD	Ryan Schucker, Landowner/Mid Valley Farms
Ross Curtis, OPRD	Eric Pimm, Landowner
Chrissy Curran, SHPO	Dennis Glaser, Mid Valley Farms
Larry Thompson, Boston Mill Society (BMS)	Jack Pimm, Landowner
Martin Thompson, BMS	Dave Goracke, Landowner
Rosalind Keeney, Linn Co. Landmarks	Ryan Glaser, Landowner
Glenn Harrison, BMS, Linn Co. Historical Society, Linn Co. Historic Resource Commission	Judy Harrison, Landowner
	Larry Ruckert, Landowner

Meeting began at 3 pm with introductions.

Denise provided an overview of the November technical team meeting. View the final summary and other related technical documents at: www.calapooia.org

She provided an overview of the meeting agenda and the meetings' main goal, which is to inform landowners and stakeholders about the consensus decision for a preferred alternative for the Sodom Project.

Background of process and working group provided for BMS:

- The CWC has worked on the Thompson's Mills projects since 2002 and the formation of the Thompson's Mills Working Group that was convened at the bequest of then-governor John Kitzhaber to address the complex issues surrounding water rights, fish passage and water management.

- The Calapooia Watershed is home to 2 species listed as threatened by the federal Endangered Species Act: Spring chinook and winter steelhead. The former owner of the Mills was not cooperating with state and federal agencies to address fish passage associated with the Mills and the governor was hopeful that by convening a group with all the right players in the room representing state and federal natural resource agencies, the contentious issues could be resolved without ending up in court.
- The Working Group disbanded in 2004, following the transfer of 12 cfs of the Mills' historic water rights to instream water rights and the Parks' purchase of the Mills from a private landowner.
- When State Parks purchased the property, they recognized that fish passage and water management were a part of owning the structure on par with restoring the Mills and developing a plan for their management and historical interpretation.
- In 2006, State Parks applied for and received funding from 2 grant sources to address fish passage associated with the Mills at the Sodom Dam. They contracted with a private engineering firm to develop alternatives for improving fish passage at the Sodom and Shear dams.
- In 2008, the engineering firm working with State Parks to develop alternatives for Sodom and Shear developed a matrix with close to 50 options and no clear preferred alternative. State Parks reached an impasse in their ability to move the project forward and was rapidly losing support from local landowners following a series of severe winter storms that caused local flooding that was worsened by water management thru the floodgates at the Mills.
- State Parks and the project's primary funding source, the Oregon Watershed Enhancement Board, approached the Council to seek their leadership in working with the local community and Technical Team to find a workable solution. The Council had completed the successful implementation of the Brownsville Dam removal and pump station installation and had the experience of working on a complex water management issue with a diverse group of stakeholders.
- The Council met with the local agriculture community in April 2008 to gauge their support for the Council to take on the project. The Council did not want to sink time and resources into a project that was going to be too contentious to make progress. The farming community agreed that working with the Council would be better than having the federal government come in to make decisions about the future of the dams.
- The Council agreed to be the leader for the process to develop alternatives for water management and fish passage at the Sodom and Shear dams. The Council pulled together a Technical Team of state, federal and tribes and began landowner outreach to work through a nearly year-long process of data collection and alternatives development. Since November 2008, there has been a series of 9 landowner and technical team meetings that culminated in October 2009 with a consensus decision to for the Council to move forward with implementing dam removal at Sodom and securing funding to remove Shear dam.
- Several landowners have dedicated significant time to attending these meetings, which included an analysis of alternatives which were the most feasible, most cost effective, was supported by regulatory permits and agencies (government).
- The preferred alternative described here was developed with feedback from landowners and agency staff and takes into consideration the economic realities of implementing the project. It is derived from the most supported components presented in the original alternatives. This approach is one that is achievable with available funding and is a solution that addresses the project's objectives for fish passage, water delivery for landowners and reduces flood risk.

Review of Combined Alternative Project

The preferred alternative includes 4 components. The first two will be implemented by the Calapooia Watershed Council with engineering services from River Design Group in Corvallis and continued involvement of a Technical Team of local, state and federal stakeholders:

- 1. In 2010: Remove Sodom Dam. Maintain channel grade by installing grade control with fish passage at all flows. Develop bifurcation design to minimize maintenance.**
- 2. In 2011: Remove Shear Dam. Regrade channel and establish fish passage at all flows.**

The current plan is to split the project into 2 phases by removing the Sodom dam in 2010 and removing the Shear dam in 2011. There are two main reasons for this: (1) the funding for the Sodom dam removal is solid, secure, and expires in 2010. For the removal of Shear Dam, the funding is not available until April 2011. (2) OPRD and the Mill need a different water system and need time to arrange for this.

Oregon State Parks will work to implement the following project components with cooperation from the Calapooia Watershed Council:

3. In 2011: Remove Spillway Dam (*optional*) .
4. In 2011: Move Thompson's Mills to an alternate water system to meet water needs for demonstration milling , fire protection for the Mills and aesthetics .

Project Element 1 – Remove Sodom Dam

The Sodom Dam is located 1300-1400 feet downstream of the bifurcation. The entire Sodom Dam will be removed and no part of it will be left in the River. The entire channel between the bifurcation and the dam will be a restoration project. Grade control structures will be installed in the channel with large boulders keyed deeply to the channel bed and into the banks then, covered with streambed material. Two to four grade control structures will be needed to provide enough elevation in the Sodom to raise flows by one foot in the Calapooia. These structures will pass fish at all flows. The structures can migrate some and not compromise the integrity of the project. This style of project provides flexibility to adjust elevations and make modifications to get them to the appropriate height (vs. concrete weirs or full planning weirs). In addition to the grade control structures, other large boulders will be installed throughout the entire reach to add some roughness and improve energy dissipation.

The grade control structures will be coupled with some channel building to narrow the Sodom channel in this reach and create a bench within the overly wide existing channel where sediment can deposit and vegetation can establish.

Project Element 2 – Remove Shear Dam/Regrade channel

The Shear Dam will be removed entirely and the channel regarded at the project footprint. No grade control will be installed at this location to allow the channel to downcut and regain some capacity to carry higher flows.

Project Element 3 – Remove Spillway Dam. Develop alternative water supply for the Thompson’s Mills. (Optional project components, not funded by the watershed council.)

Oregon Parks and Recreation Department (OPRD) will determine whether to pursue removal of Spillway Dam. It is not a barrier for fish passage and it is not creating issues for sediment or water delivery. OPRD will need to determine what type of water delivery system will best meet their needs and develop designs to implement the project.

When the Shear dam comes out, there will be minimal channel work done. The project will drop the level of the Calapooia channel by about one foot after the increased flows flush out the sediment that has filled it in. Currently via LIDAR images, we can see Calapooia channel is elevated above the floodplain. When the river floods and goes out of bank, the water is on the floodplain and cannot get back to the Calapooia channel. The natural erosion of the channel will take time as the channel is filled in not only with sediment but also vegetation. The project is designed to recapture flow in the Calapooia and have a higher functioning channel.

25% Design Presentation (design developed by River Design Group of Corvallis)

Slide: Vicinity map. Small portion of the Sodom channel will have the grade control structures installed.

Slide: Project site aerial photo. Grade control will occur between red line and red dot.

Slide: Detailed site aerial photo, can barely see Calapooia channel because the vegetation is so thick, can see log boom that stretched across the channel in past, now is gone.

Q. Where is first grade control structure?

A. The first structure will be just downstream of the bifurcation. There won't be visible drops in the river as you go downstream, it will be a steep pool, riffle sequence. These grade control structures will not be a control feature for winter flow. Other landscape elevations will control winter flow, as the whole shape and form of valley stores and moves water. The Calapooia side of the valley will experience as much of the winter flows as it does now because it is much lower than the Sodom side of valley. All of the sloughs are on Calapooia side of watershed. The Sodom side of the valley is perched higher, has different soil types, and doesn't have capacity to hold as much water. The Calapooia will continue to flood after this project is completed. However, one of the goals of this project is to hopefully limit flooding so the Calapooia doesn't flood every single time it rains. This project will increase capacity of Calapooia channel enough to capture flooding from small rain events, but they won't capture water from 3, 5, or 10 year rain event. The grade control structures won't resolve all of the flooding issues.

Slide: Bifurcation design principles. Most challenging for RDG is redesign of bifurcation, which is most stable with evenly split flow between the Sodom and Calapooia channels. Project goal is move sediment down Sodom and not down the Calapooia. Project goal is to minimize maintenance so there won't be a 2-3 year need but a 5-7 year need for maintenance. Erosion is a natural process in rivers and sediment

will end up somewhere. OPRD is willing to develop maintenance plan. Boulders are being used for this design because they are more flexible than concrete they also provide 100% fish passage.

Slide: 25% design showing the Calapooia River. Notice deepest point of channel is near bank. Riprap on this outside bend will be maintained. RDG will use large wood structures to help keep flow directed into the channel. The deepest part of channel is near the inlet to the Calapooia. Sweeping flow needs to be enhanced to move sediment and debris through Sodom. Engineered log jams will deflect flow into channel. Change inlet to Calapooia to keep velocity as the River moves around the corner.

Slide: 25% design showing 3 more structures with pool riffle sequence. Putting in pool riffle to restore channel elevation of 12 foot difference. Structures will dissipate energy of river. This stretch of the Sodom needs to balance out a 2% slope in a river that has 0.1% slope just downstream.

Slide: Grade control structures: Clean water bypass, work will occur with river in the dry—river will be diverted around the site during the construction process. Boulders pounded in, smaller rocks pounded in, sediment will be “washed” in and locked into place. These structures are designed to stay in place and will be stable. River will look natural immediately after construction.

Slide: Grade control structures. These will consist of large wood anchored into the river bank, with structures sticking out of bank. Near the bifurcation, the wood will be placed into existing rip rap and there may be large boulders added. The wood will not move. Through the grade control structures, engineered riffles, there will be fish passage at all flows.

Slide: Engineered riffles with vegetated soil lifts. These utilize tight bundles of vegetation with soil. Vegetation does the best job of stabilizing banks.

Slide: Spillway dam in relation to Mills. In terms of river miles, the Calapooia River is much longer than the Sodom, as it is much more sinuous. The Calapooia Channel has been moving over time. The Sodom channel has not been as dynamic as Calapooia has/is.

Project Discussion

Comments and Questions from the meeting participants: Questions and comments from participants in italics. Response from Denise in plain text.

Did you consider leaving it alone?

If no action is taken, two possible results are (1)—the Calapooia channel would eventually be cut off, and (2) OPRD would be in violation of the Endangered Species Act and would need to surrender their FERC license exemption to FERC. As part of the FERC surrender process, state and federal fish agencies get to determine what happens to all energy devices on ground. If OPRD does not complete the FERC surrender process, the federal agencies will come in and regulate. This process would not include a consensus decision making process and stakeholders would not be included in the process. Water management is big concern, and this project maintains it.

Is the fish ladder inadequate at Sodom Dam? Why is there a fish passage problem?

The team did consider remodeling the fish ladder (discussion can be found in August 2009 meeting notes online). The cost of remodeling and updating the fish ladder to meet current regulations is triple the cost of removing the dam. All small concrete dams have a 40-60 year life expectancy. The Sodom dam is more than 50 years old, at the end of its life and needs to be rebuilt. The current fish ladder has holes in the concrete in addition the whole fish ladder needs to be re-built. Prior to modern research, managers and fish ladder engineers used to think fish needed big jumps, but that is not the case, as the big jumps are very stressful for fish. The jumps in the current Sodom ladder are too big. We now know that jumps need to be 6 inches for juvenile and adult fish, therefore there would need to be six inch pools all the way downstream. Our current grant funding is not for rebuilding dam.

What is the funding for this project?

This alternative paid for by matched grants from OWEB (\$1.1 million) and the Open Rivers Initiative/NOAA Restoration Center \$330,000. The total cost of the project is projected to be \$1.2-1.4 million

Will there still be water in the Calapooia during summer?

There was great concern expressed over potential inability to get water during the summer months. Several possibilities were addressed earlier in the projects, including directing 100% of flow down the Calapooia channel or 100% of flow down the Sodom Channel. This would change water rights for landowners. Directing 100% of the flow in the Calapooia channel is also unrealistic because of the significant amount of dredging needed in the Calapooia Channel (1.2 million cy sediments). Additionally, the required archaeological work would have required a multimillion dollar study for the Calapooia floodplain. Directing 100% of the flow into the Sodom channel wouldn't work, either, as folks still wanted to access the Calapooia, the Calapooia was the historic channel of the river, and that portion of the river contains cooler water and has more vegetative cover, providing thermal refuge for fish. Another option considered was a variable control structure considered, to have essentially a new dam to control water, but that option was incredibly expensive and would have been a permanent structure.

Can power still be generated at the mill?

According to OPRD's FERC license, they can produce power at the Mills but can't sell the power back to grid. They can use the power to do demonstration milling or demonstrate sustainable power sources.

Please explain what OPRD's FERC license is.

OPRD currently has FERC (Federal Energy Regulatory Commission) exemption from licensing because they are a small power producing operation. Small power producers are exempt from meeting all FERC guidelines, but they still have to comply with all fish provisions and provide fish passage. By law, OPRD is required to surrender their exemption, because they are no longer generating power and selling it to the grid. Through the process of surrender, OPRD has to address the fish provisions and meet the fish passage requirements, which requires some sort of action at the site.

Will the project need to divert water during construction?

Yes, water will be piped aboveground around the construction area. Some of the water may be diverted down the Calapooia channel. CWC will work out an irrigation schedule with all landowners for the 3-4 weeks we anticipate needing the pipes.

Who will be performing maintenance at the site 20 years from now?

A requirement of the "FERC surrender of exemption" is to have a formal maintenance agreement between FERC and OPRD. The regulatory agencies will not sign off on the project and related permits until they know what the future maintenance plan will be.

Is there a trigger number of fish going by these dams/waterways which requires management action?

Steve Mamoyac at ODFW could better answer that question. Right now the Calapooia has a struggling spring Chinook population and a sustainable steelhead population.

With the Shear Dam removed, what is the anticipated timeline for channel scouring to occur?

Some movement of sediment is expected within the first year, the channel will be re-graded, but not stabilized, so some sediment will move. It is expected that the vegetation will die back in 3-5 yrs, creating significant changes in Calapooia channel. What happens in the future will depend on future flow events. There won't be much change during low flow years. To create scour, there would need to be higher summer flows, near the 25-30 CFS that we had in August.

What is specifically happening during phase 3—when will the Spillway be addressed?

This will be up to OPRD/Mills to address in 2011. They are required to have a certain amount of water on the site for fire protection for the Mills..

What is happening with water flows through Walton slough?

OPRD response: elevation is critical. Flows will be managed thru the millrace in winter. Figure out best balance. Spillway dam will be taken out or notched.

How have historic resource concerns been represented in this process?

State historic preservation office folks will help answer this question.

Ross Curtis, representing OPRD. Parks takes the historic preservation of the Mills seriously and is well aware of significance of water works. We need to look beyond the significant historic significance of initial waterway. Fish passage is a big deal. We care about historic water rights and water works, but those being impacted would not make Thompson's mills any less significant as a historic property. There has been much discussion and looking at other alternatives with all the affected groups and stakeholders. Mills are just one partner in system. Historic resources doesn't trump other partners in system.

Denise commended all stakeholders and particularly landowners who have been committed to this process since the beginning. In January 2010, there will be another meeting on the 60% RDG project

design.

Meeting adjourned at 4:30 pm. OPRD, SHPO, and CWC staff remained to answer remaining questions.

Prepared by Pamela Archer and Denise Hoffert-Hay. Questions, comments or edits email to: hofferthay@peak.org or phone 541.619.5896