

Willamette Mission Channel Reconnection Project Moves Forward

In late April, the OWEB Technical Review Team approved our revised proposal to reconnect nearly two miles of remnant channel and oxbow lake to the river at Willamette Mission State Park by removing three man-made barriers to river flow. Our engineering consultants developed a robust hydraulic model using recent LiDAR and sonar data to guide this project, and used this model to develop a three-phase approach, which was favorably received by Oregon State Parks (the landowner) and regulatory agencies that issue the required permits.

This summer, we will install a temporary road to connect Beaver Island to the mainland while we remove the existing road and replace it with a clear-span bridge. Material removed from the remnant channel beneath the existing road will be used to build up approach ramps. These ramps will incorporate culverts to pass higher flows over the adjoining floodplain. We will also remove invasive weeds along the remnant channel and install grade control structures (engineered log jams) along the channel before removing the earthen berm at the inlet.

Once the river rises next winter, moving water will begin to scour the old channel out, while depositing fill materials into Mission Lake. Removal of the riprap and bridge at the outlet will wait for Phase 2. Installing grade control structures in the remnant channel and leaving the outlet constriction in place will provide erosion control, prevent headcutting and allow material scoured from the channel to accumulate in Mission Lake, returning it to a more natural form that is both shallower and narrower.

After the first year of winter flow, we will evaluate progress to date and adjust the grade control structures as necessary as part of Phase 2. If the channel has scoured to the extent we expect, we will widen and deepen the outlet by removing the riprap and bridge from this area and excavating a low-flow channel to allow summer connectivity between the channel, the lake, and the river.

Throughout this project, we will be working to remove invasive weeds from the riparian areas. In Phase 3, we will revegetate with native species after two or three years of intensive weed control. We will continue to control weeds and encourage native plants until the natives are free to grow without additional help. We will also continue our monitoring program to evaluate changes to the system, including changes in the use and presence of fish, birds, reptiles, amphibians and mammals.

The Technical Review Team liked this approach, which seeks only to remove human impediments to fluvial processes and allows the river to respond in a natural way. They also liked the phased approach, which will allow us to adjust our methods in response to what natural river processes. Lessons we learn on this project will guide us and others as we restore complexity to the river throughout the valley.

We will provide our members with updates as work progresses, and we will be seeking volunteers in time to assist us with various elements of this exciting project.

Mission Bottom Channel Reconnection Project Overview

