

Water Control Structures repairs and upgrades - Implementation Plan

Authors: Jeff Merrill, Metro, Associate Natural Resource Scientist

Date: January 13, 2015

Sites:

Smith and Bybee Wetlands
Multnomah Channel Marsh

Project Description:

In Fall of 2014 the Natural Areas Team began a project to implement repairs and upgrades on three water control structures (WCS) that control water levels at two Metro natural areas, Smith and Bybee wetlands (one structure) and Multnomah Channel Marsh (two structures). These repairs and upgrades are based on operational safety concerns as well as the desire for more flexible functionality for the structures. Three processes are underway to inform the parameters of the project:

1. Gathering a functional 'wish list' from the Science Team members that manage the WCS (Completed).
2. Analyzing the operation of the WCS by the NALM Team from a safety perspective utilizing a 'job hazard analysis' process and SAIF confined space report (Underway).
3. Engaging an on-call engineering firm to implement a structural analysis of the WCS to catalog any structural repairs needed (Underway by KPFF Consulting Engineers).

Metro will partner with Ducks Unlimited engineers to analyze the three elements listed above with the goal of utilizing their expertise to make design recommendations, produce design drawings and to oversee the construction of the upgrades and repairs that come out of this process.

Project lead:

Jeff Merrill

Project support:

Justin Cooley
Nathaniel Marquiss

Project stakeholders:

Inside Metro:

Curt Zonick, Senior Natural Resource Scientist
Elaine Stewart, Senior Natural Resource Scientist
Justin Takkunen, Natural Areas Supervisor

Project risk:

Risks for this project involves unforeseen and unpredictable expenses, depending on the necessary engineering solutions.

Who needs to approve this project?

Jonathan Soll, Science and Stewardship Program Manager

Dan Moeller, Natural Areas Land Management Program Manager

Start date

August 2014

End date

December 2017

Conservation targets:

Emergent Wetland

Infrastructure

Monitoring:

Digital photographs will be taken before the project is implemented, as the project is under construction and after the project is completed. A professional engineer will be on-site during construction to monitor progress and ensure compliance with plans. Periodic visits to the water control structures for operation will allow staff to assess integrity of structures.

Long-term maintenance implications:

This project will enhance the existing ability to control many hundreds of acres of reed canarygrass and restore wetland habitats. These upgrades and repairs should last at least a decade before another structural or safety assessment is necessary.

Budget and funding source:

The project budget is TBD and will be funded from the Smith and Bybee Fund.

Overview of roles and responsibilities:

Jeff Merrill will be project lead. Occasional support from the NALM team may be necessary.

Important checkpoints:

- Safety Assessments complete (February 2015)
- Structural Assessments complete (February 2015)
- Design recommendations and designs (May 2015)*
- Permitting and RFB (June 2015)*

- Construction (September 2015)*

*tentative timeline

Project timeline and implementation task list:

Date	Task	Lead	Assist	Cost	Status
Feb-15	Safety assessments (JHAs, SAIF reports)	Mike Amodeo	Bill Jemison		
Feb-15	Structural Assessments	Jeff Merrill		\$ 6900	
Jan-15	Meeting with Ducks Unlimited to scope project	JM			
Jan-15	Contract with Ducks Unlimited	JM	MB		
May-15	Design Recommendations and Design	DU	JM	TBD	
Jun-15	Permitting and RFB development	DU	JM		
Jul-15	Construction contractor selection	DU, JM			
Sep-15	Project construction	DU	JM		
Total				\$ TBD	

Fiscal Year	Costs
FY 15	\$ 6900
FY 16	\$ TBD
FY 17	\$ TBD
Total	\$TBD

Project Map/Aerial:

Smith and Bybee



Multnomah Channel

