

Public and Interagency Meeting
Swalley Irrigation District Irrigation Modernization Project
Draft Watershed Plan-Environmental Assessment

Wednesday October 10, 2018
6:30 – 8:00 PM
Cascades Academy
19860 Tumalo Reservoir Road
Bend, OR 97703

Meeting Purpose

To inform the community of the Draft Watershed Plan-Environmental Assessment (Draft Plan-EA) for the proposed Swalley Irrigation District Irrigation Modernization Project, and to gather public comments on the Draft Plan-EA.

Meeting Agenda

Introduction to Watershed Program PL 83-566
Introduction to Swalley Irrigation District
Overview of the Draft Plan-EA
Breakout Session for Public Comments

Comments on the Draft Plan-EA may be submitted through October 24, 2018.

Written comments will be accepted at the meeting and can also be submitted via:

Email: swalleycomments@gmail.com

Online form at: oregonwatershedplans.org

Mail: Farmers Conservation Alliance
Swalley Watershed Plan
11 3rd Street Suite 101
Hood River, OR 97031

For further questions, please call FCA at 541-716-6085.

Project Purpose

The goal of the Swalley Irrigation District Modernization Project is to improve water conservation, water delivery reliability, and public safety on 16.6 miles of canals and laterals owned by Swalley Irrigation District. The project would increase flows in the Deschutes River downstream of North Canal Dam during the irrigation season and decrease energy use associated with pumping.

Project Sponsors

- Lead Federal Agency: Natural Resources Conservation Service (NRCS)
- Lead Project Sponsor: Deschutes Basin Board of Control (DBBC)
- Project Co-Sponsor: Swalley Irrigation District (SID)

Project Location

- Deschutes County, Oregon; 2nd Congressional District
- Hydrologic Unit: Upper Deschutes River (17070301)

Agencies and Other Stakeholders

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| Bend Park and Recreation District | Oregon Governor's Office |
| Business Oregon | Oregon State Historic Preservation Office |
| Central Oregon Land Watch | Oregon Water Resources Department |
| City of Bend | Oregon Watershed Enhancement Board |
| Coalition for the Deschutes | Trout Unlimited |
| Confederated Tribes of the Warm Springs | U.S. Army Corps of Engineers |
| Deschutes County | U.S. Bureau of Land Management |
| Deschutes River Conservancy | U.S. Fish and Wildlife Service |
| Oregon Department of Environmental Quality | U.S. Forest Service, Deschutes National Forest |
| Oregon Department of Fish and Wildlife | Upper Deschutes Watershed Council |
| Oregon Department of State Lands | WaterWatch of Oregon |

Background

- Swalley Irrigation District provides irrigation water to 668 patrons and 4,333 acres using one diversion on the Deschutes River which is shared with two other irrigation districts.
- Water is delivered to patrons through a series of pipes and open canals; un-piped sections lose approximately 23% of the water to seepage and evaporation.
- SID struggles to deliver sufficient flows to its patrons in the spring and fall due to inefficient and outdated infrastructure, along with new environmental demands and drought.
- Irrigation diversions and reservoir operations contribute to low summer flows in the Deschutes River downstream from the City of Bend and low winter flows upstream from

the City of Bend. Low flows diminish water quality and habitat quality for fish and aquatic species.

Resource Concerns

A public scoping process was used early in the development of the project to identify issues, concerns, and potential effects that require detailed analysis. Using input obtained during scoping, NRCS refined the SID Irrigation Modernization Project to focus on relevant resource concerns and issues. These include, but are not limited to:

- Reduced fish and aquatic habitat associated with low streamflow
- Inefficient irrigation water delivery leading to low drought tolerance for local agriculture
- Poor water quality, elevated stream temperatures
- Inefficient energy use from individual patron pumps
- Risks to public safety from open canals

Project Alternatives

Multiple project alternatives were considered to address the resource concerns listed above. The following alternatives were eliminated due to cost, logistics, technology, social and environmental reasons, or were not consistent with PL 83-566 requirements: pipeline realignment outside the District's rights-of-way, conversion to dryland farming, fallowing farm fields, voluntary duty reduction, on-farm efficiency upgrades, canal lining, piping private laterals, steel pressurized piping, polyvinyl chloride pressurized piping, and the exclusive or partial use of groundwater for irrigation.

Two alternatives are evaluated in the Draft Plan-EA based on their benefits, costs, as well as social, cultural, and environmental effects:

- No Action Alternative: SID would continue to operate and maintain its existing canal, lateral, and pipe system in its current condition.
- High Density Polyethylene Piping Alternative: SID's open canals and laterals would be converted to buried, high-density polyethylene (HDPE) pressurized pipe.

The benefits and costs of these alternatives were evaluated over a 100-year period, including any change in operations and maintenance costs and any replacement costs based on design life. The total project cost of Piping Alternative is expected to be \$14,975,000.

Project Piping Measures

- Pipe and pressurize 16.6 miles of SID's system with HDPE pipe ranging in diameter from 8 to 48 inches.
- Upgrade 178 District-owned turnouts to pressurized delivery systems.
- Install a 400 horsepower, variable-frequency drive booster pump and associated pump house to pressurize water for patrons downstream of the existing hydroelectric plant.
- Construction would be completed over 6 years, beginning with the Rogers Lateral and Sublateral.

Project Benefits

- Reduce water loss from canal seepage and evaporation and save an estimated 6,172 acre-feet annually.
- Protect 75% of the total water saved instream in the Deschutes River, an estimated 4,627 acre-feet annually, through Oregon's Allocation of Conserved Water Program.
- Improve water delivery reliability for patrons throughout the irrigation season by alleviating supply shortages.
- Convert the conveyance system into an on-demand system as sections are piped to allow water to remain instream when not being used.
- Piping would allow for pressurized deliveries to patrons, reducing or eliminating the need for pumping and saving patrons up to \$232,000 annually in pumping costs.
- Accounting for the booster pump's energy use, the project would have a net energy conservation of approximately 1,056 megawatt-hours per year, avoiding about 786 metric tons of carbon dioxide emissions per year.
- Improve public safety by eliminating the risk of drowning in open canals.

Funding

The District is requesting \$11,231,000 from the NRCS Watershed Program (PL 83-566). The expected funding sources for the SID Irrigation Modernization Project are:

- NRCS Watershed Program
- Oregon Department of Environmental Quality Clean Water State Revolving Loan Fund
- In-kind services from SID
- Other grants