

April 18, 2016 OWEB Grant Cycle Willamette Basin Review Team (Region 3)

Application No.:	217-3009	Project Type:	Restoration
Project Name:	Gales Creek Clear Creek Confluence Project		
Applicant:	Tualatin River WC		
Basin:	WILLAMETTE	County:	Washington
OWEB Request:	\$49,366.00	Total Cost:	\$144,707.00

Application Description

Proposed project is located near the Gales Creek confluence with Clear Creek in the Tualatin watershed. Proposed restoration will reconnect an extensive matrix of historically available side-channel habitat on four acres of alluvial deposition plain adjacent to the confluence. Juvenile salmon and trout seeking upstream temperature refugia have few options due to a passage barrier 2.1 miles upstream where a natural bedrock intrusion blocks access to Clear Creek and modification of a historic juvenile rearing surface area at the Gales/Clear Creek Confluence. Through modification of an existing upstream dike and placement of large woody debris, this project will reintroduce peak winter flows into the alluvial floodplain and restore fluvial scouring. The outcome will be increased habitat complexity with open side-channels cooled by hyporheic flow that serves as thermal refugia. Proposed effectiveness monitoring over five years includes juvenile fish presence, temperature, water quality, water quantity, and tracers for flow patterns to compare ground water and hyporheic flows on the floodplain. Project partners include Clean Water Services, ODFW, and Tualatin River Watershed Council.

REVIEW PROCESS

Regional Review Team Evaluation

Application strengths identified during review include:

- Project site is located on a tributary with the highest habitat potential for fish in the Tualatin watershed, and currently has one of the highest concentrations of coho.
- Data indicates juvenile fish are unable to access cool stream temperatures. Proposed restoration provides a low-risk opportunity to test an approach for altering a dike to reactivate hyporheic flow so that a cool temperature creek can interact with and benefit a temperature limited creek. Effectiveness monitoring will provide data to document results that could inform effective alternatives to complete levee removal in diked systems when it is not feasible.
- Project cost benefit is excellent for the ecological value.
- Project team has relevant, proven experience; therefore, project has a likelihood of success.

Application concerns identified during review include:

- Tualatin is not the highest priority for ESA-listed fish species recovery; however, Gales Creek is the highest priority location for fish habitat restoration in the Tualatin watershed.
- Application would be strengthened by further explanation on why the pipe for the crossing is a necessary project element and on expected habitat outcomes of the dike alteration design to fully understand habitat benefits resulting from this project.

Concluding Analysis:

Proposed project is located in a priority location for the Tualatin watershed, and will benefit water temperature and fish habitat. This project provides a cost effective data gathering opportunity to understand the impact of altering dikes for the purpose of watershed restoration. Monitoring data will inform whether meaningful ecological benefits can be gained in a diked system without complete levee removal, which is not always an option.

Ecosystem Process and Function

Altering levees and dikes to increase connectivity of streams, side-channels, and floodplains can provide water quality and fish habitat benefits by restoring watershed hydrologic function.

Regional Review Team Recommendation to Staff

Fund

Regional Review Team Priority

5 of 9

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
\$49,366.00		

Staff Recommendation to the Board

Fund

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
\$49,366.00		