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GODLEY DITCH FISH PASSAGE

Completion Report

Performance Period
June 1, 2011 to April 30, 2012

Prepared by:

Lyle Kuchenbecker
Contract Project Planner
Grande Ronde Model Watershed Program

Prepared for:
United States Department of Energy
Bonneville Power Administration
Division of Fish and Wildlife
P.O. Box 3621
Portland, OR 97208

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Contract No. 53180

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Background

The Catherine Creek system supports three ESA-listed fish species. They are Snake River spring Chinook and summer steelhead, and Columbia River bull trout. The spring Chinook population in Catherine Creek in one of the highest priority populations for restoration in the Grande Ronde Basin. The project installed a step-pool fishway adjacent to the Godley Diversion structure and made modifications to the channel-spanning diversion structure.

Existing Conditions

The Godley Ditch irrigation diversion structure is one of nine permanent concrete diversions on Catherine Creek. The diversion is located in the City of Union. The Godley Ditch diversion was identified as a barrier to juvenile Chinook and steelhead, bull trout and other native species by the GRMW in coordination with the Oregon Department of Fish and Wildlife.

The Godley Ditch diversion structure, depending of flows, was a barrier to juvenile salmonids as well as other native fish such as bull trout when water was checked up for irrigation withdrawal. Check boards were normally installed in late-July as stream flows declined. By that time the adult Chinook migration had normally passed the structure, so were not affected. However the boards, which were in place from late-July through the end of October restricted fish passage throughout the summer when water temperatures were warming and fish needed to move upstream to find more suitable water temperatures.

The existing facility consisted of a concrete sill extending across the channel (see attached pictures), wing-wall and ditch headgate. Brackets which hold the check boards were located on the downstream side of the concrete sill. According to the irrigator the existing facilities were constructed by the Corps of Engineers in 1950 just after a major flood. About 1990 the irrigators added to the cross-channel concrete sill by pouring another level above the original sill constructed in 1950.

Project Location

The legal description is T4S, R40E, Sec. 18, SW ¼ of the SW ¼. The diversion is at Catherine Creek RM 40.

Project Description

The GRMW coordinated with the Oregon Department of Fish and Wildlife to determine the need to provide fish passage at the diversion. Although not a barrier to adult steelhead and only occasionally a partial barrier to adult Chinook the structure did block juvenile steelhead and Chinook as well as most native species during the time check boards were in place. The GRMW contacted the owners of the diversion to determine their interest in allowing us to install a fish ladder and make modifications to the diversion structure.

The project objective was:

- Provide year-round fish passage for all life stages of all native species, particularly juvenile steelhead and Chinook.

The GRMW accomplished the following planning, design and implementation activities:

- Contracted with Anderson Perry & Associates to do site surveys and prepare engineering designs.
- Prepared a Project Proposal which was reviewed by the GRMW Technical Committee and approved by the GRMW Board of Directors
- Completed ESA consultation through the USFWS Partners for Wildlife Program.
- Completed Cultural Resource Section 106 consultation with Oregon State Historic Preservation Office, the Confederated Tribes of the Umatilla Indian Reservation and the Nez Perce Tribe.
- Coordinated and obtained fish passage design approval from NOAA Fisheries and the Oregon Department of Fish and Wildlife (ODFW).
- Contracted with Anderson Perry & Associates to conduct construction engineering inspections.
- Conducted fish salvage operations.

Completed Construction Activities

The preferred alternative, developed in consultation with ODFW and the NOAA Fish Passage engineer, was to construct a step-pool fish ladder on the south streambank adjacent to the diversion ditch headgate. Additionally some modifications to the concrete sill and installation of a rock weir below the structure were required.

The in-water work window was July 1 to August 15. Exceptionally high water in the spring and early summer delayed the start of construction to August 11. The GRMW requested and received an in-water work extension to August 29. The contractor, Gyllenberg Construction completed in-water work by August 22nd. The original design was for a cast in-place concrete step-pool fish ladder but the contractor could not keep the excavated area free of water. This required a design change which involved redesigning the ladder to be a precast, three-piece structure. The redesign delayed final completion of the ladder to December 5, 2011.

The following construction activities were completed on the project:

- Constructed flow bypass channel
- Installed steel plate on top of the pre-existing concrete diversion sill
- Notched concrete sill to provide flow bypass attractant water near the inlet to the fish ladder
- Installed rock vortex channel-spanning weir for grade control below the diversion
- Placed stream simulation material below the concrete sill downstream to the weir
- Excavated for and installed the precast step-pool fish ladder with headgate
- Completed site contouring and seeding

Work was completed too late in the fall to complete seeding and site rehabilitation in December. Site contouring and seeding was done in April, 2012.

Monitoring

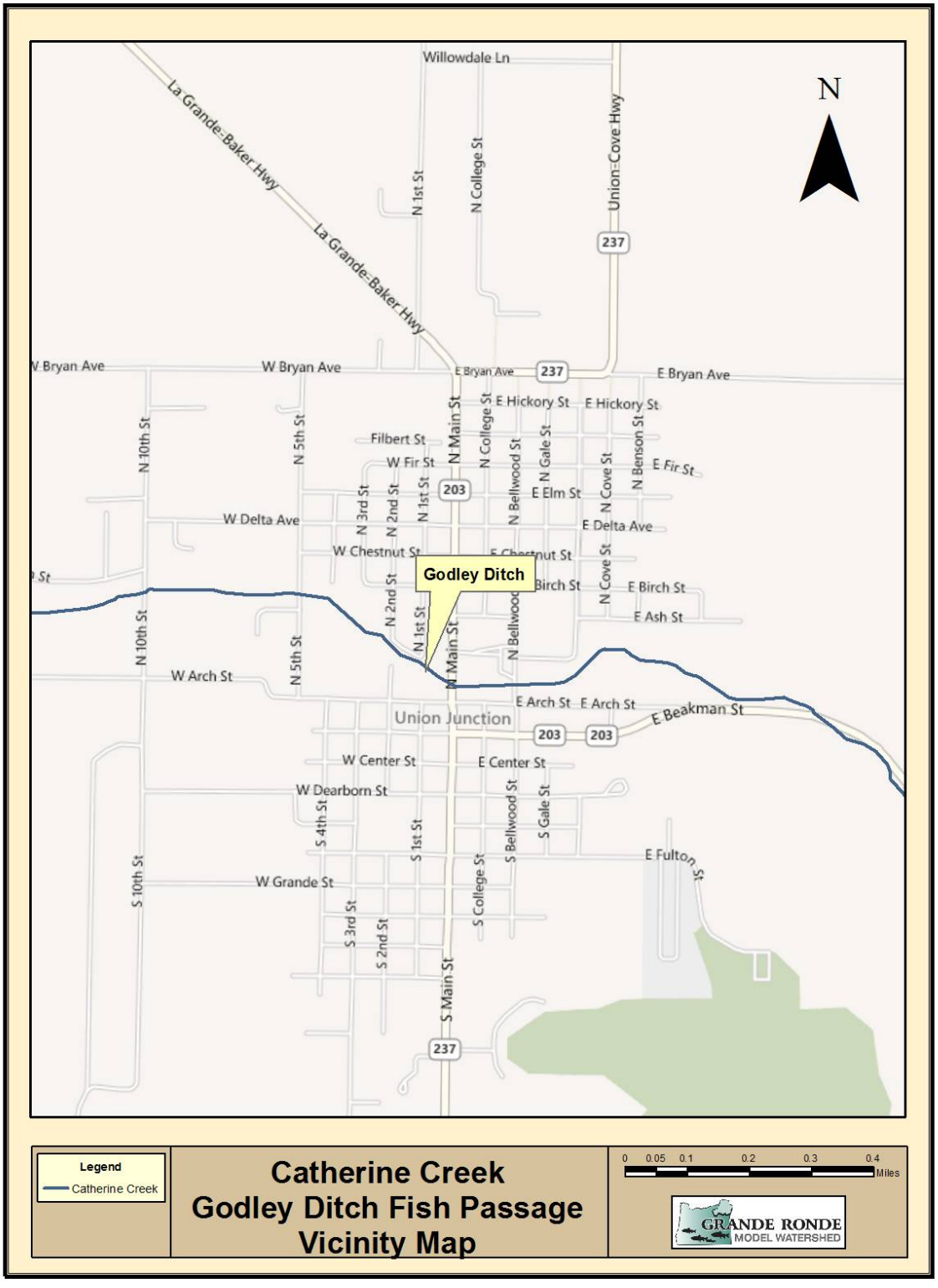
The ODFW will operate the fish ladder and periodically monitor the ladder for trash accumulation during the period boards are in place and the ladder is in operation. GRMW will annually inspect the rock weir for damage and displaced rocks that may affect fish passage.

Budget and Expenditures

All work was entirely funded by BPA.

Godley Fish Passage Budget

	Expenditures
Mobilization	$5,000
Job photos	$300
Clearing & grubbing	$4,500
Fishway excavation	$1,000
Step-pool fishway	$38,291
Grade control rock weir	$7,500
Streambed simulation material	$5,000
Erosion control	$2,000
Water control	$2,000
Seeding and site rehab	$1,200
Labor - Engineering & Inspection	$10,485
Project Total	**$77,276**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E Fulton St
S 10th St
W Grande St
S College St
S 3rd St
S 2nd St
S Main St
237
Legend
Catherine Creek
Catherine Creek
Godley Ditch Fish Passage
Vicinity Map
0 0.05 0.1 0.2 0.3 0.4
Miles
GRANDE RONDE
MODEL WATERSHED

Pre-project boards fully installed

Pre-project ditch headgate

Pre-project-boards partially installed-view to south

Pre-project-boards fully installed-upstream view

Post-construction-view upstream-low flow channel

Post-construction-inlet to step-pool fish ladder

Post-project-diversion without boards-view to south

Post-project-ditch headgate and fish ladder outlet