

Restoration Stewardship Plan

Project sponsors that have completed a restoration project must provide a stewardship plan at the close of the project. A plan is necessary to ensure the landowner will maintain the project area at least ten years after completion. Please complete the information below, sign, and return this form to your RCO grant manager at the close of the project.

Project Title: MF Newaukum Fish Passage Site ID 021(45011)(07070)

SRFB Project Number: 17-1420

1. **Project Purpose.**

The primary goal of removing the barrier culvert within the Middle Fork Newaukum River was to replace an existing fish passage barrier with a fish passable structure.

In addition to replacing the culvert the project placed large woody debris (LWD) within the channel. The installation of LWD is anticipated to retain bedloads and elevate stream levels to allow for better floodplain connectivity, increase habitat complexity and increase organic inputs.

The project objective was to restore salmon access to 2.5 linear miles of potential habitat for the Southwest Washington evolutionary significant unit (ESU) of coho salmon as well as searun cutthroat and resident cutthroat trout

Providing a larger hydraulic opening under the county road will also reduce velocities and erosion during high flows.

2. **Project Description.**

The primary objective of the MF Newaukum Fish Passage_Site ID 021(45011)(07070) Project was to replace an existing 60-inch diameter corrugated metal pipe with a fish passable structure. Project activities included the construction of a new 24 ft wide by 8 ft tall box culvert; approximately 40 feet in length.

In addition to placement of the fish passable structure the stream channel was regraded within the area 114 ft upstream and 71 ft downstream of the new structure. Two large woody debris structures were placed; one upstream and one downstream of the crossing. Nine western red cedar, 4 bigleaf maple, 3 Oregon ash, 19 red osier dogwood, and 3 Pacific willow and 18 Sitka willows were planted within the riparian buffer. Channel banks were also hydroseeded with a native mix consisting of various grasses, Nootka rose, common snowberry, Oregon grape, and oceanspray.

3. **Monitoring and Maintenance Responsibilities.**

The box culvert placed as part of the MF Newaukum Fish Passage_Site ID 021(45011)(07070) Project is part of Lewis County's infrastructure, therefore, Lewis County is committed to maintaining this culvert.

In order to meet the regional conditional of the USACE permit the following metrics will be used to determine an effective box culvert installation:

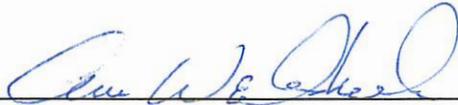
- Streambed material persists in the culvert;
- No abrupt drop greater than 0.8-ft; and
- Surface flow is consistent with unaffected reaches within the stream at summer low flow.

Project completion to one year: Lewis County will inspect the culvert and restoration area after the first two major storm events following project completion to determine if the site and culvert is stable and continues to provide unimpeded fish passage at all life stages. If a visual inspection indicates an unanticipated change from the as-built condition, then a new profile will be completed.

Beginning of year two to end of year five: The culvert site will be inspected twice annually; once during a high flow event and once during summer low flow from the beginning of year two to the end of year five. At the end of year five, a final stream profile will be completed.

4. **Planned effectiveness monitoring**

The woody plantings installed within the project area will be inspected annually and dead loss plants will be replaced at years three and five if it is determined that there is less than seventy percent survival of tree species or less than fifty percent survival of willows (any naturally recruiting species may count as a live plant). The culvert itself will be inspected by area maintenance crews annually.



Grantee/Landowner

1/13/20
Date