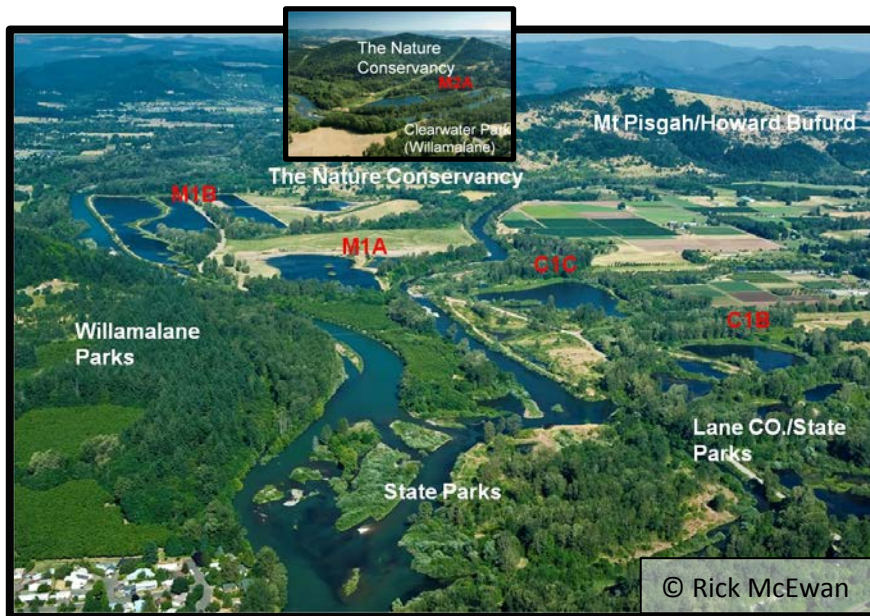


Willamette River Floodplain Restoration, Oregon Ecosystem Restoration Project

18 September 2013



ABSTRACT: The project proposes to restore floodplain ecosystem functions along the Willamette River in the vicinity of Eugene, Oregon, by reconnecting floodplain habitats to the river and improving fish and wildlife habitats. The non-Federal sponsor is The Nature Conservancy.

The Willamette River Basin is located in northwestern Oregon and drains 12,000 square miles of the state (12%). The Willamette River is one of largest tributaries to Columbia

River, and is the 10th largest river in U.S. based on average annual flow. Seventy percent of Oregon's population lives in the Willamette Valley. The Willamette River was awarded the Thies International River Prize in 2012 as a high profile watershed for restoration and was named an American Heritage River in 1998 (1 of 14).

Ecosystem restoration opportunities were identified and analyzed within the context of numerous federal and state watershed purposes. The feasibility study focused on the Lower Coast and Middle Forks of the Willamette River. The study assessed opportunities to restore floodplain and riverine features and process, restoring natural wetlands and aquatic habitat. Restoration of natural floodplain function and riverine processes also benefits fish and wildlife resources, including threatened species listed under the Endangered Species Act (ESA) and waterfowl and other migratory birds that use this area along the Pacific Flyway. This restoration project offers an excellent opportunity to restore habitat conditions and to promote resiliency of the Upper Willamette system, including robustness with expected changes in climate and rainfall/runoff patterns.

The study area was divided into 10 reaches, five on the Middle Fork, four on the Coast Fork, and one on the Row River. The ten reaches were reduced to six priority reaches that had the greatest restoration potential. Numerous restoration measures were developed and applied to 43 sites. At nearly every site, passive (minimum) versus more engineered (maximum) alternatives were developed to capture a range of measures that could be undertaken. Ecosystem-specific models calculated functional values for the future condition, under both without-, and with-project scenarios. This environmental benefits analysis measured the increase in both the quality and quantity of targeted ecosystem components associated with various proposed restoration measures and alternatives at each site. Further screening of critical sites, and determining the Cost-Effectiveness and Incremental Cost Analysis of each alternative then resulted in a discrete list of "Best Buy" plans - those alternatives that provide the greatest increase in environmental output for the least increase in cost.

The Recommended Plan is Plan 6. It is the Locally Preferred Plan (LPP) which is smaller scale and lower cost than the National Ecosystem Restoration (NER) plan. Plan 6 provides restoration of five sites (C1B, M1A, M1B, C1C, and M2A) along the lower two miles of both the Coast Fork and Middle Fork of the Willamette River. The sites were former gravel mines. Restoration actions include increasing shallow water floodplain habitat by re-grading the slopes of former gravel mine pits, connecting off-channel ponds to each other and to the rivers, creating refuge habitat for fish and other aquatic species, removing invasive plant species and replanting with native floodplain species, installing engineered log jams in the river to promote scour of pools and channels, and placing additional wood in the floodplain and off-channel areas. The Recommended Plan would restore 574 acres of floodplain; provide habitat to a variety of fish and wildlife species, including the ESA-listed Upper Willamette River Chinook salmon, bull trout and Oregon chub; add complexity to river channel and floodplain habitat; and increase and improve wetland functions. The Recommended Plan would result in a total increase of 182.3 annual habitat units.

The total first cost for the Recommended Plan is \$41,322,000, based on 2013 price levels (October 2012). The cost-sharing for construction of this ecosystem restoration project will be \$26,859,000 (65 percent) Federal and \$14,463,000 (35 percent) non-Federal. The Non-Federal Sponsor (The Nature Conservancy) will provide all lands, easements, relocations, rights-of-way, and disposal or borrow areas, and operate and maintain the project.

REPORT DOCUMENTATION: Pertinent documentation on the project, the results of the Civil Works Review Board, and subsequent Washington-Level Review Actions, are linked below:

- CWRB Agenda
- [Project Summary](#)
- [CWRB Briefing Slides](#)
- [CWRB Lessons Learned](#)
- CWRB Meeting Record
- State & Agency Review Comment Letters
- Documentation of Review Findings
- [Signed Chief of Engineers Report](#)
- Advance Copy to Congressional Committees
- ASA(CW) Memo to OMB
- OMB Response
- ASA(CW) Transmittal to Congress
- Signed Record of Decision
- Authorization

ADDITIONAL INFORMATION:

[Northwestern Division](#)

[Portland District](#)