



Wetlands Projects funded by the Clean Water State Revolving Fund (CWSRF)

Winona Wetlands Purchase

The City of Port Townsend, Washington was able to meet both storm water management objectives and a wetlands preservation goal by obtaining funding from Washington's SRF to purchase an area known as the Winona Wetlands. This wetland acts as a critical storm water basin for the area and provides valuable wildlife habitat. Potential development of the area not only threatened the wetlands but would also result in storm water management problems. By purchasing the wetlands, the city was able to protect a natural storm water management system as well as a wildlife refuge. The city purchased 6.5 acres in Phase I and is currently planning to borrow additional CWSRF funds for a Phase II purchase of 9 acres. This \$400,000 project is part of the National Estuary Program (CWA §320) for the Puget Sound estuary. A portion of the city's storm water utility fee paid by households is being used to repay the Washington SRF.

Wetland Reconstruction

The City of Des Moines, Washington is using CWSRF funds to purchase and reconstruct a badly degraded wetland area and to construct a sediment trap/pond facility. This project is allowing the city to meet two goals it constantly struggles to achieve: flood protection and wetlands preservation and enhancement. Area storm water will enter one of two sediment traps by way of the surrounding reconstructed wetlands. The wetlands serve the dual purpose of providing flood protection by collecting storm water runoff, and acting as a preliminary filter by removing suspended solids. The majority of sediment and any heavy metal removal will occur while the water is in the sediment traps. The water will then leave the traps through artificial inlets that lead to Barnes Creek, which eventually enters Puget Sound. This \$222,500 project is part of the National Estuary Program (CWA §320).

Protecting Darby Creek

Recently, the Ohio State Revolving Fund provided a low interest loan to a homebuilder to construct a variety of preventive nonpoint source measures to protect the Darby Creek, which is one of the highest quality watersheds in the State. The Darby Creek is recognized by the U.S. Department of Agriculture, the Nature Conservancy, and many others as a "national treasure." It is one of the five best warm water river habitats in the continental U.S. and the last refuge of many threatened or endangered species.

The project includes a wide variety of structural and non-structural best management practices intended to protect approximately 1.5 miles of this high quality watershed from potential runoff

from a new housing development. The developer has designed a comprehensive system of best management practices with the idea of protecting water quality and the surrounding habitat during and after construction of the homes. The project includes construction of sediment and storm water retention lakes, grassed waterways for storm water treatment, restoration of the wooded stream corridor, and the establishment of emergent wetland habitat. Additionally, the project includes a 200 acre conservation easement to protect the most environmentally sensitive areas. The conservation easement contains conditions, covenants, deed restrictions and regulations which protect the entire area. The project also contains an environmental education component for homeowners and housing contractors. This \$575,000 project is part of the Nonpoint Source Program (CWA §319).

Conservation Easement Purchase

The Ohio EPA recently awarded a low-interest SRF loan to the Nature Conservancy to foster creek bank conservation. The Nature Conservancy received the \$110,000 loan to purchase a permanent conservation easement along Brush Creek in Adams County, Ohio. This is the first time The Nature Conservancy has obtained financing for stream restoration and protection from a State Revolving Fund.

Ohio EPA's water quality standards classify this section of Ohio Brush Creek as almost achieving the exceptional warm water aquatic habitat classification. The Creek is a significant state-wide water resource and is known to contain four endangered aquatic species, including the club shell mussel.

The Nature Conservancy will purchase a 154-acre permanent conservation easement on property immediately adjacent to Brush Creek. Conservation easements allow owners to voluntarily place permanent restrictions on how their property will be used. "Conservation easements are an effective way to protect the quality of streams and their adjacent areas," said Ohio EPA Director Donald R. Schregardus. "Restoring and preserving these riparian areas is an important part of controlling contaminated runoff that threatens water quality and stream habitat. This type of loan is a new assistance tool for protecting and preserving Ohio's water resources. We hope other state and local organizations will consider using the [SRF] loan program in their areas to help protect our waterways." This \$110,000 project is eligible under the Nonpoint Source Program (CWA §319).

Huichica Creek Vineyard Sustainable Agriculture Project

The Napa County Resource Conservation District (Napa RCD) of Napa, California received a loan from the State Revolving Fund for the Huichica Creek Vineyard Sustainable Agricultural Demonstration Project. The project will be an outdoor classroom designed to encourage the adoption of these best management practices in perennial crops in California. The SRF loan will be used to install surface drainage improvements; restore wetland areas between vineyard blocks,

which includes construction of a weir, planting native vegetative species, and development of the necessary habitat structures for waterfowl and raptors; and stabilize creek bed and restore riparian vegetation. The overall project includes incorporating best management practices and low input viticulture techniques that include long-term monitoring of water quality, soil nutrition, insect pest populations, biodiversity changes, and the economics of the vineyard. The project will demonstrate: commercial viticultural methods that are environmentally sensitive and economically feasible; the maximum use of biodiversity to control grape pests and diseases and to enhance wildlife habitat in and around the vineyard; the reduction of risk of nonpoint source water pollution from sedimentation and chemical residues from pesticides and fertilizers; and practices that can produce high quality fruit made into a premium wine economically. In addition to the SRF loan, the Napa RCD received a CWA §319 (h) grant to assist in implementation aspects of the project.

Wetlands Construction

Oregon has taken advantage of its SRF funds for many wetlands projects. In the Town of Lakeview, CWSRF is funding a project to expand and upgrade a lagoon wastewater treatment system. Included in this project is the construction of a wetland to improve the natural treatment system. The CWSRF funded the construction of a wetland in the City of Mount Angel to polish effluent from another lagoon treatment system. The City of Woodburn used the CWSRF to fund the construction of a wastewater treatment system using a Poplar plantation for phytoremediation. Although this is not a constructed wetland it is a project that expanded and improved a natural treatment system. In addition, the cities of Florence and Ashland are looking to use constructed wetlands in future CWSRF funded projects.

Constructed Wetlands for Wastewater Treatment

Five communities in South Dakota have received CWSRF loans for wetlands projects. The communities of Clear Lake, Huron, Lake Cochrane, Pickeral Lake, and Richmond Lake have used CWSRF loans to construct wetlands as part of improvements to its publicly-owned treatment works (POTW). Constructed wetlands are a complex of saturated substrates, emergent and subemergent vegetation, animal life, and water that stimulates natural wetlands for various benefits. In these cases the wetlands follow a lagoon treatment system to further reduce pollutant levels in the wastewater prior to discharge. User charges are being used to repay the loans which total about \$7.5 million for all five communities.