

Biweekly Wetland and Stream Corridor Restoration Update

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Welcome to the *Biweekly Wetland and Stream Corridor Restoration Update*. This Web site

- Provides current information on wetland and stream corridor restoration projects
- Recognizes outstanding restoration projects
- Offers a forum for information sharing

We welcome the submission of articles and announcements related to your restoration project. Just send your write-up to EPA's contractor at restorationupdate@tetratech-ffx.com or mail it to Rebecca Schmidt, Biweekly Restoration Update Coordinator, Tetra Tech, Inc., 10306 Eaton Place, Suite 340, Fairfax, VA 22030. We will carefully consider your submission for inclusion in a future update. If your submission is selected, please note that it might be edited for length or style before being posted. Because this Web site is meant to be a public forum on restoration information, we cannot post any information that is copyrighted or information that advocates or lobbies for any political, business, or commercial purposes or has the appearance of doing so.

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Feature Article

Land Trust Leads Restoration of Idaho's Big Wood River

A local land trust is working to restore the Big Wood River in south-central Idaho. The river has undergone many changes since the City of Hailey was established in the late 1800s. It has been channelized and constricted to make room for riverfront houses throughout the city. Channelization has caused the river to cut down into the streambed, creating erosion, and pollutants have degraded aquatic life habitat. The riparian habitat along the river has diminished dramatically as well. The area surrounding Lion's Park was historically pristine cottonwood forest, but it became the City of Hailey's landfill in the early 1900s. The community now uses this area to play baseball and softball, and the City uses the surrounding area to store snow and gravel.

In September 2000 the Wood River Land Trust (WRLT) began working with the City of Hailey to restore the Big Wood River. This effort entails working collaboratively with government agencies, landowners, the City government, and the community to revive existing parks, create new natural parks along the river, and work to protect the private lands adjacent to the Big Wood. WRLT earned a \$395,000 Clean Water Act section 319 grant from EPA through Idaho's Department of Environmental Quality to restore the river along the southern portion of Hailey.

The section 319 project is an effort to restore Lion's Park and the Big Wood River to benefit wildlife and the community. This effort consists of two separate restoration projects—the Lion's Park Restoration Project and the Riverside Restoration Project.

Lion's Park Restoration Project. Lion's Park has been a major contributor of pollutants to the Big Wood River. The City of Hailey uses this site along the river to store gravel and snow, and as a result harmful pollutants are deposited into the river. The Land Trust collaborated with the City to restore this site and to protect the fish and other aquatic life that use the river.

In late 2002 the City and WRLT removed a total of 5,000 cubic yards of material from the west bank of the river, decreasing the slope to prevent further erosion. WRLT installed four rock structures in the river channel at Lion's Park to slow the river velocity and create fish habitat. To begin streambank restoration efforts and to hold the disturbed soil in place during spring runoff, WRLT planted more than 180 willows along the riverbank and seeded the area with native grasses and wildflowers. In spring 2003 WRLT will complete a pathway to the river that will be accessible to persons with disabilities. The trust will also hold a public Native Shrub Planting Day to plant emergent/wetland plants and riparian vegetation. When complete, the site will be restored with native vegetation and will have a public access

trail for passive recreation, including bird watching, wildlife viewing, and hiking, and a place to walk pets. WRLT will continue to work with the City of Hailey to ensure that future uses of the property are not harmful to the river.

Riverside Restoration Project. WRLT and the City of Hailey have begun restoring the decommissioned Riverside Wastewater Treatment Plant site, adjacent to Heagle Park in Hailey. Excavation crews are creating a groundwater-fed wetland/pond along the river. The crews have broken ground and will complete pond construction by the end of February 2003. In spring 2003 WRLT will hold a volunteer day to plant emergent/wetland plants and riparian vegetation.

Partners for the 319 project include WRLT, City of Hailey, EPA, Idaho Department of Environmental Quality, Blaine County Planning and Zoning, Wood River Watershed Advisory Group, and adjacent landowners.

The WRLT is a nonprofit organization created in 1994. It seeks to keep central Idaho land in private hands and to promote the continuation of historical uses such as farming, ranching, and recreation while ensuring a legacy of open space for future generations. For more information, see www.woodriverlandtrust.org/index.html.

If you'd like your project to appear as our next featured article, e-mail a short description to restorationupdate@tetrattech-ffx.com.

Community-Based Restoration Partnerships

New York Restoration Group Unveils New Education Effort

Hackensack Riverkeeper, in its effort to protect, preserve, and restore the Hackensack River and surrounding estuary, is experimenting with a new community outreach event designed specifically to educate the community about environmental issues—*RiverFilms*. This monthly series, which began in December 2002, features screenings of documentaries along with discussions on the complex issues surrounding environmental degradation and restoration. The Puffin Cultural Forum, in its mission to bring art into the lives of ordinary people, has partnered with Hackensack Riverkeeper in this outreach project.

Previous movies have included *Lavender Lake: Brooklyn's Gowanus Canal* (December), *Containment: Life After Three Mile Island* (January), and *Blue Vinyl* (February). Coming shows include the following:

March 18, 2003: *Drumbeat for Mother Earth* (1999). Many scientists and tribal people consider persistent toxic chemicals to be the greatest threat to the long-term survival of Indigenous Peoples. *Drumbeat for Mother Earth* explores how these chemicals contaminate the traditional food web, violate treaty rights, and travel long distances. The video features testimony from a variety of Indigenous

Nations in the United States, Central America, and the Arctic, as well as interviews with scientists, activists, and chemical industry spokespersons.

April 15, 2003: (1990). Containing some of the most spectacular underwater footage ever shot, this film explores the abundant life in Atlantic coastal rivers. The river is the thread that binds together species as different as salmon, lampreys, ospreys—and humans. Ospreys, kingfishers, cormorants, beavers, snapping turtles, sturgeons, and bass are some of the creatures that appear above or below the surface of the rushing river. The film stresses that humans play a role in the river's ecology.

All showings begin at 7 p.m. at the Puffin Cultural Forum, 20 East Oakdene Avenue, Teaneck, New York. For more information about the films or the Hackensack Riverkeeper, contact Kathy Urffer at 201-968-0808, or kathyu@hackensackriverkeeper.org, or visit the Web site www.hackensackriverkeeper.org/Riverfilms_release.htm.

Native Plant Stewards Lead Restoration Effort in Central Washington

Through its Native Plant Stewardship Program, the Central Puget Sound chapter of the Washington Native Plant Society (WNPS) is working to ensure restoration of important habitat areas. The Program provides training in native plant identification, ecology, restoration, and public outreach to community volunteers who wish to be certified as native plant stewards. Experts in botany, restoration, wetlands, landscaping, and natural resources volunteer their time to train the stewards through lectures, field trips, and workshops. The WNPS conducts the program with the assistance and technical support of nonprofit organizations, local government agencies, scientists, and previous native plant stewards.

The Program was started in 1996 by the Central Puget Sound Chapter and Washington State University Cooperative Extension, King County. Funding has come from many local, state, and federal sources. In 2000 the Program expanded to include two training classes, one in King County and one in Snohomish County. Other communities around the country have used the Program as a model for similar programs, and it has received national attention.

The following are examples of past and ongoing projects conducted by the native plant stewards trained in King County:

Twin Ponds Park: Native plant stewards and other community volunteers have been working hard for many years to enhance this urban park's forested areas and shoreline. More than 160 trees from 200 taxa have been planted, creating a small arboretum. Volunteers continue to maintain these plantings, control invasive species, and add more plants.

Meridian Park: About 3 acres of wetland and woodland habitat was hiding under blackberries, ivy, and holly until the neighborhood association got to work. More than 800 native plants have been planted, including trees, shrubs, emergents, and native wildflowers.

Paramount Park Natural Area: This open-space part of the park has been transformed from a filled wetland covered by blackberries to a peaceful natural area with two ponds connected to existing streams

and wetlands. Volunteers continue to fight noxious weeds, such as Himalayan blackberry, Japanese knotweed, and bindweed.

Fern Hollow Restoration: Fern Hollow is a ravine containing an unnamed stream that flows into Lake Washington. The stewards' goals include restoring the riparian vegetation, planting the steep hillsides with native trees, removing invasives, helping neighbors improve their landscapes with native vegetation, improving wildlife habitat, and providing a demonstration restoration site for Mercer Island residents.

White Center Heights and Arbor Lake Habitat Stewardship: King County Parks restored the habitat along the lake shores in these two small urban parks by removing invasive plants and planting native plants. The stewards provide plant monitoring and maintenance.

For more information, see www.wnps.org/cps or call the WNPS at 206-527-3210 (or toll free 888-288-8022) and leave a message for Sasha Shaw, Stewardship Program Coordinator in King County.

If you are part of an innovative community-based partnership that is working to restore river corridors or wetlands, we'd like to hear from you. Please send a short description of your partnership to restorationupdate@tetrattech-ffx.com.

Achieving Restoration Results

Ohio Program Simplifies Restoration

Ohio EPA's Water Resource Restoration Sponsor Program is making watershed restoration easier. The Program is an innovative financing tool made possible through Ohio's Water Pollution Control Loan Fund (WPCLF), which is made possible by EPA's Clean Water State Revolving Fund. It works by allowing recipients of WPCLF loans for wastewater treatment improvements to sponsor projects, implemented by themselves or by another organization such as a park district or land trust, with the goal to protect, restore, and manage water quality resources. In return for sponsoring the project, the loan recipient's interest rate is reduced to offset the costs of the sponsorship. The additional 0.1 percent savings in interest allows the water quality protection or restoration project to be funded at no additional cost to the sponsor or project implementer. And with the reduced interest rate, the sponsor also realizes a net savings over what its loan would have cost to repay without the sponsorship.

In early February 2003 Ohio EPA announced that it had recently provided \$5.2 million to the Trust for Public Land and the Geauga County Park District to help fund the acquisition of 574 acres of the Bass Lake Preserve near Chardon (Gauga County). The Geauga County Park District, as owner of the property, will manage the area as a preserve. The cities of Willoughby Hills (Lake County), Ravenna (Portage County), and New Philadelphia (Tuscarawas County) recently received low-interest loans from the WPCLF to finance major improvements to their respective wastewater treatment facilities. Under the

loan agreements, the cities also agreed to participate in the Water Resource Restoration Sponsor Program by helping to fund the acquisition of the Bass Lake Preserve.

“The Water Resource Restoration Sponsor Program is a great example of how partnerships and creative thinking combine to benefit the environment,” said Ohio EPA Director Christopher Jones. “I’m proud that Ohio EPA was able to assist in providing funding toward the preservation of Bass Lake Preserve.”

Since October 2000 the Ohio EPA’s Water Resource Restoration Sponsor Program has provided more than \$27 million to projects that have protected or restored approximately 38 miles of stream corridors and 3,474 acres of wetlands. For more information on the Program, contact Ohio EPA’s Division of Environmental and Financial Assistance at 614-644-3655 or see ftp://www.epa.state.oh.us/pub/defa/WRRSP_Fact_sheet.pdf.

If you are part of an innovative restoration project that has had positive results, we’d like to hear from you. Please send a short description of your project to restorationupdate@tetrattech-ffx.com.

Funding for Restoration Projects

American Greenways Awards Program Now Accepting Applications

The Conservation Fund and Eastman Kodak Company are accepting applications for the 2003 Kodak American Greenways Awards program through June 1, 2003. Award recipients will receive between \$500 and \$2,500 to help plan and design greenways that link recreational, cultural, and natural features; provide pathways for people and wildlife; and protect forests, wetlands, and grasslands. To learn more about the program, visit www.conservationfund.org/conservation/amgreen/index.html and click on Kodak Awards Program or contact the American Greenways Program Coordinator at 703-526-6300 or greenways@conservationfund.org.

Please send any news you have on funding mechanisms available to local community organizations to restorationupdate@tetrattech-ffx.com.

News and Announcements

NOAA Biologists and Birds team Up to Restore Seagrass Beds

Biologists from the National Oceanic and Atmospheric Administration (NOAA) Damage Assessment Center plan to call on their feathered friends to help restore injured seagrass beds in the Florida Keys National Marine Sanctuary. NOAA biologists will begin installing a series of bird stakes—vertical PVC pipes topped by wooden blocks—to restore several seagrass beds damaged by boat groundings in

locations from Key West to Key Largo over the next few months. Weather permitting, work will begin in March 2003.

The use of bird stakes is one of several methods NOAA biologists are using to restore seagrass beds injured by vessel groundings. Biologists line injured areas with the stakes, which provide attractive roosting areas for cormorants and other seabirds. The bird's droppings provide a jolt of fertilizer to the area below, helping to speed the growth of shoal grass (*Halodule wrightii*). Shoal grass is an early colonizer of barren areas, preparing the way for other species, such as turtle grass (*Thalassia testudinum*) and manatee grass (*Syringodium filiforme*), to grow once again.

Sean Meehan and Kevin Kirsch are the lead NOAA biologists in this seagrass restoration project. "We think it's fitting that the first in a series of seagrass restoration projects coincides with Seagrass Awareness Month in March," said Meehan. "While we prefer to prevent boat groundings in the first place, we are happy that recently developed seagrass restoration techniques give us an alternative to watching these sites undergo a painfully slow recovery, or worse, continue to degrade."

The Florida Keys National Marine Sanctuary averages more than 600 reported vessel groundings each year. In 2002, 128 reports resulted in warnings or citations for the vessel owner or operator. Of these, 122 involved injury to seagrass, while six occurred in coral. The National Marine Sanctuaries Act authorizes NOAA to seek damages from the responsible party in a grounding to cover response costs, injury assessment costs, costs to restore or replace the injured habitat or acquire equivalent habitat, and costs to compensate the public for the value of the injured resources until they fully recover.

Seagrass meadows provide both nursery and feeding grounds for recreationally and commercially important fish and other marine life. Seagrass also filters and stabilizes sediments, helping to create the clear waters for which the Florida Keys are known. For more information see www.publicaffairs.noaa.gov/releases2003/ and click on the 2/25/03 hyperlink for the Restoring Injured Seagrass article.

Tampa Bay Estuary Program Awards \$90,000 in Community Grants

For the 2002–2003 Tampa Bay Mini-Grant funding cycle, the Tampa Bay Estuary Program has awarded \$90,000 to 16 community groups for projects that directly involve citizens in restoring and improving Tampa Bay. Funds for the Mini-Grant program come from sales of the Tampa Bay Estuary license plate, also known as the "Tarpon Tag." License plate revenues may be used only for projects like the Mini-Grant program that directly help to implement bay restoration goals. The 2002–2003 Bay Mini-Grant recipients include the following:

Friends of Brooker Creek Preserve (\$7,397). Adult and youth volunteers will restore areas of Pinellas County's Brooker Creek Preserve. Native species will be planted and maintained, along with an educational butterfly garden exhibit.

Association of Overlook (\$3,950). Resident's of this Clearwater condominium community will remove invasive plants from common property along a tidal stream. The residents will work with Extension Service experts to remove dense stands of Brazilian pepper and replace them with native plants. In

addition, an educational video will be produced to provide background information and a “how to” section on eradicating invasives that can be shared with other homeowners.

Dixie Hollins High School (\$3,000). Two ecology classes from this St. Petersburg school will participate in a water quality study and restoration project of Lake Skipper, located on the west side of the school.

Tampa Audubon (\$5,000). Volunteers from Tampa Audubon will assist the Tampa Parks Department in removing Brazilian pepper from McKay Bay Nature Park and replanting with native plants.

Egmont Key Alliance (\$7,035). The Alliance will plant 6,000 to 7,000 native beach plants on dunes, berms, and upland beaches in front of the historical structures at Egmont Key State Park. These plants will provide wildlife habitat and will help to stabilize the new sand received on the northwest shore from a local dredging project.

For a complete list of grantees, see www.tbep.org/bayminigrants/winners_02.html.

California Governor Announces \$5 Million for Delta Tidal Marsh Restoration

In November 2002 Governor Gray Davis announced that \$5 million had been allocated for the acquisition and restoration of 1,200 acres of tidal marsh along the Sacramento-San Joaquin Delta at Dutch Slough in the city of Oakley in Contra Costa County. “This rare opportunity allows us to protect our natural resources for future generations,” Gov. Davis said. “It is critical to continue these local partnerships to protect and restore our environment while ensuring a reliable water supply for the people of this state.”

This money comes from Proposition 40 and was voted on by the California Coastal Conservancy at its meeting in Napa. The total project cost is \$25 million, and the project will also be supported by a diversity of bond funds. The restoration is part of the CALFED Bay-Delta Ecosystem Restoration project.

The Dutch Slough project provides a unique opportunity to restore a large-scale tidal marsh. Dutch Slough, in the western Sacramento-San Joaquin Delta, is a critical transition zone between saltwater and freshwater, creating a rich habitat that is important to native resident and migratory fish. The site has not subsided as deeply as many other parts of the Delta, allowing for a variety of tidal marsh restoration activities.

When restored, the site will be a key component of a series of tidal marshes that extend east nearly 20 miles from Suisun Marsh. Threatened and endangered fish, including Chinook salmon, Sacramento splittail, and delta smelt, as well as other species, will benefit from this project. Rebuilding these fish populations will help ease restrictions on water management in the Sacramento-San Joaquin Delta.

More than 97 percent of the estimated original 350,000 acres of historical wetlands in the Delta have been eliminated over time, and many of the native fish species that depend on these habitats are

threatened or endangered because of the habitat decline. For more information see http://resources.ca.gov/agency_news.html.

Upcoming Conferences and Events

New Listings

Native Plants: The Future of Earth's Garden (17th Annual Lahr Symposium)

March 29, 2003

Washington, DC 20002

The 17th Annual Lahr Symposium presents a day of ideas and tools useful for anyone concerned with landscaping. Ecologist Emile DeVito will explore the combined effects of forest fragmentation, urban sprawl, and unmanaged wildlife on the nations remaining natural forests. Elizabeth Watson, executive director of Eastern Shore Heritage and coauthor of the authoritative *Saving America's Countryside*, will explain how Heritage Area designation can help preserve natural resources as well as our cultural landscapes. Janet Marinelli, director of publishing at the Brooklyn Botanic Garden, will share her reflections on American landscapes and "Gardening in the Age of Extinction." Concurrent sessions will address plant identification, the wonderful world of fungi, designing landscapes with water in mind, and designing native plant gardens and habitats that really work. Symposium registrants can shop early at the Native Plant Sale. For program brochure, fees, and symposium registration form, call 202-245-5898. For more information, see www.usna.usda.gov/Education/17lahr.html.

Best Management Practices for Mountain Stream Water Quality: Erosion Control, Stormwater, and Stream Restoration

April 16, 2003

Banner Elk, North Carolina

The purpose of this workshop is to provide practical hands-on instruction regarding

- Stream restoration (using natural channel design techniques)
- New sediment and erosion control technologies
- Innovative stormwater management/BMPs
- Water quality/watershed education

The conference costs \$25 per person if registration is submitted by April 2, 2003. Conference sponsors include North Carolina State University College (NCSU), College of Biological and Agricultural Engineering, Soil Science Department; NCSU Water Quality Group; North Carolina Cooperative Extension Service, and the Water Resources Research Institute of the University of North Carolina. For more information, see www.bae.ncsu.edu/programs/extension/wqg/sri/watuaga%20workshop%2003.htm.

Invasive Plants in Natural and Managed Systems: Linking Science and Management

November 3–7, 2003

Fort Lauderdale, Florida

The conference goals are: (1) to promote scientific exchange among invasive plant researchers; (2) to provide interchange (technology and needs transfer) among scientists, managers, and volunteers for efficient invasive plant management; and (3) to foster interdisciplinary cooperation on the science and management of invasive plants. A number of field trips are being planned for before and after the conference. Within a 3-hour drive of Fort Lauderdale are a variety of sites that will be of interest to conference attendees, including three National Parks/Preserves (Everglades National Park, Biscayne National Park, and Big Cypress Preserve) and two large projects restoring natural areas after severe biological invasion. For more information see www.esa.org/ipinams-emapi7.

Previous Listings

Society for Ecological Restoration, Northwest—2003 Regional Conference

“The Restoration Toolbox”

March 24–28, 2003

Oregon Convention Center

Restoration ecology is a rapidly growing field with broad participation from diverse technical and cultural groups. The conference brings ecologists together to share their questions and learn from each other’s experience in this complex but essential endeavor. Conference sessions will include weed management, native plants, soils, fish and wildlife, and cultural restoration. For more information see www.fisheries.org/wd/news/2002/Ecological_Restoration_Northwest_2003_Regional_Conference_CFP.htm.

Symposium on Landscape Ecology and Wildlife Habitat Evaluation: Critical Information for Ecological Risk Assessment, Land-Use Management Activities, and Biodiversity Enhancement Practices

April 7–9, 2003

Kansas City, Missouri

The symposium was organized (1) to stimulate exchanges among risk assessors, wildlife managers, and landscape ecologists regarding better approaches to evaluating environmental conditions and assessing risk to ecological resources and (2) to explore existing standards and determine whether new approaches and new standards to characterize and quantify ecological resource conditions and to assess risk to those resources are warranted. For more information, contact Hannah Sparks at 610-832-9677; fax: 610-832-9667, e-mail hsparks@astm.org.

Inaugural National Conference on Coastal and Estuarine Habitat Restoration

April 13–16, 2003

Baltimore, Maryland

The National Conference on Coastal and Estuarine Habitat Restoration, hosted by the nonprofit group Restore America's Estuaries, is intended to mobilize the coastal and estuarine habitat restoration community to advance knowledge, practice, pace, and success in habitat restoration. The conference will draw participants from the government, corporate, nonprofit, and academic sectors. For more information, see www.estuaries.org/nationalconference.php or contact Restore America's Estuaries by phone at 703-524-0248.

To post your restoration news and announcements, please send information to restorationupdate@tetrattech-ffx.com.

Restoration-Related Web Sites

www.dcr.state.va.us/sw/index.htm#newstuff

Virginia Soil and Water Conservation. This Web site maintained by the Virginia Department of Conservation and Recreation has information on a variety of stream restoration programs, including Adopt-A-Stream, floodplain management, and the Conservation Reserve Enhancement Program. Links to other restoration programs, including the Chesapeake Bay Program, are also provided. *This Web site is a good source of information on watersheds and watershed conservation organizations throughout Virginia.*

www.coastalamerica.gov

Coastal America. A nonprofit partnership, Coastal America is dedicated to protecting, preserving, and restoring America's coastal heritage. It works with public, private, and government agencies to perform coastal and wetland restoration efforts throughout the United States. Information is available on community-based, corporate, and military conservation partnerships, including project descriptions, funding sources, and contact information. *This site provides specific information on projects funded by Coastal America grant programs.*

www.des.state.nh.us/rivers

New Hampshire Rivers Management and Protection Program. This program was established to protect New Hampshire Rivers recognized for their outstanding natural or cultural resources. The Web site describes the history, geology, and biology of many rivers and also provides management plans for the listed rivers. *This Web site would be useful for anyone seeking information on how to protect rivers from degradation.*

www.forester.net/ec.html

Erosion Control Magazine. This on-line magazine, the official journal of the International Erosion Control Association, contains articles and information on preventing accelerated soil erosion and

minimizing sedimentation. Included are articles focusing on stream restoration projects, channel stabilization techniques, and biological methods for erosion control. *This Web site would be useful for anyone looking for innovative erosion control methods.*

www.ieca.org

International Erosion Control Association (IECA). The goal of IECA is to reduce erosion related to human activity. The Association offers numerous workshops, information on erosion-reducing techniques, and a products and services link. *This Web site would be useful for anyone looking for information on erosion control techniques.*

www.americaswetland.com

America's Wetland: Campaign to Save Coastal Louisiana. This campaign seeks increased awareness about the need to save Louisiana's coastal wetlands. The Web site contains information about the productivity and importance of Louisiana's coastal wetlands, wetland loss, and opportunities for community action. *This Web site would be useful for anyone interested in helping protect the rapidly dwindling wetland resources in Louisiana.*

www.goca.state.la.us

Louisiana Governor's Office of Coastal Activities. This page contains information on the major projects and activities approved by the State Wetlands Authority, chaired by the Governor's Office of Coastal Activities, and on the Coastal Wetlands Planning, Protection and Restoration Act ("Breux Act") projects cosponsored by the State of Louisiana. *This Web site would be useful for anyone seeking information on the Louisiana state plan to save wetlands.*

Let us know about your restoration-related Web site. Please send relevant URLs to restorationupdate@tetrattech-ffx.com.

Information Resources

Wetland Values and Functions

The Ramsar Convention on Wetlands offers a background paper on wetland values and functions. The paper, available on-line at www.ramsar.org/values_intro_e.htm, addresses wetland values and functions as they pertain to

- Flood Control
- Groundwater Replenishment
- Shoreline Stabilization and Storm Protection
- Sediment and Nutrient Retention and Export
- Climate Change Mitigation
- Water Purification
- Reservoirs of Biodiversity
- Wetland Products

- Recreation and Tourism
- Cultural Value

The hardcopy *Wetland Values and Functions* info pack containing the paper and other materials is available now from the Ramsar Bureau (higgins@ramsar.org). For more information see www.ramsar.org/wwd2002_index.htm.

Restoration of Puget Sound Rivers

Published by the University of Washington

In the Pacific Northwest, as in most regions of the United States, there is still much to learn about the processes that create habitat and river structure, how those processes influence aquatic ecosystems, and how to gauge the response of river systems to both land-use changes and restoration efforts. This volume addresses the need for a solid understanding of fluvial processes and aquatic ecology in order to predict both river and salmonid response to restoration projects.

The 18 chapters of *Restoration of Puget Sound Rivers* examine geological and geomorphological controls on river and stream characteristics and dynamics, biological aspects of river systems in the region, and the application of fluvial geomorphology, civil engineering, riparian ecology, and aquatic ecology in efforts to restore Puget Sound Rivers. For more information, visit www.washington.edu/uwpress/search/books/MONRES.html.

If you'd like to publicize the availability of relevant information resources, please send information to restorationupdate@tetrattech-ffx.com.