

Welcome to the Biweekly Restoration Information Update Page. This web site

- Provides current information on wetland and river corridor restoration projects
- Recognizes outstanding restoration projects
- Provides 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@tetrattech-ffx.com or mail it to Kathryn Phillips, 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 serves or has the appearance to serve as advocating or lobbying for any political, business, or commercial purposes.

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- [Community-Based Restoration Partnerships](#) - This section highlights innovative community-based partnerships working to restore wetlands and river corridors.
- [Funding for Restoration Projects](#) - Here you'll find information pertaining to grants and other funding sources available to local watershed groups and other grassroots community organizations to implement restoration projects.
- [News and Announcements](#) - This section includes up-to-date information on regulatory issues affecting restoration, conference and workshop announcements, and other newsworthy tidbits.
- [Restoration-Related Web Sites](#) - Check out other groups on the Web that are helping in the effort to restore wetlands and river corridors.
- [Information Resources](#) - Books, journals, fact sheets, videos, and other information resources to aid you in your restoration project are provided here.
- [Ask a Restoration Question](#) - Post your restoration related question. Answers will be provided by the EPA and Bi-Weekly readers.

Feature Article

Restoring Trout River Naturally

The Trout River is on the road to recovery, thanks to the Vermont Department of Environmental Conservation (DEC), the Five-Star Restoration program, and its partners. A flash flood in July 1997 devastated Montgomery, Vermont, and exacerbated an already serious river erosion problem in the Trout River. As the banks had eroded, the river became so broad and shallow in places that it braided and cut across two meanders. Historically, the Trout River had enjoyed the reputation of an excellent brown and brook trout fishery. But the floods, combined with the loss of a stable morphology, increased sedimentation, loss of bank vegetation, and elevated water temperatures, contributed to the severe degradation of the natural resource- and fisheries-related values of the river.

Landowners downstream from Montgomery, where the Trout River was braiding its way through fields, asked for state and federal assistance to restore the river. Soon after, multiple

stakeholders joined to form a unique partnership to address the longstanding river and field erosion problems and enhance or restore the natural resource values of the Trout River.

The First Project of Its Kind

Partially funded through a Five-Star Restoration grant, the Trout River Restoration Project brought together landowners, local community members, government agencies, and nonprofit organizations to restore a waterbody on the watershed level. The approach, new in Vermont, used the principles and applied methods of fluvial geomorphology to address the root problems associated with channel stability, rather than traditional channel management techniques, which tend to treat only the symptom of erosion.

The project began in fall 1998 with the formalization of landowner cooperation and local project coordination, surveys of the existing reach, and funding proposals. The DEC conducted watershed- and reach-level assessments of the Trout River to identify the hydrology, sediment regimes, channel geometry, riparian condition, and riverbed-level processes, as well as to identify specific problem areas.

During the 1999 and 2000 field seasons, DEC worked together with its partners to restore a 1-mile reach of the Trout River immediately downstream of Montgomery, using natural channel design techniques. Volunteers put in more than 680 hours gathering willow whips, spreading seed, installing erosion control mats, moving plant material, planting and watering trees and shrubs, staking up trees, and installing brush blanket weed barriers and watering devices. The Trout River design focused on restoring stable width, depth, meander plan form, slope, and riparian vegetation along the project reach. To achieve a stable channel, the DEC altered the location of the channel in places and placed structures such as rock vanes, rock weirs, root wads, earth berms, and tree revetments. After the project was complete, many landowners entered into the Natural Resources Conservation Service's (NRCS) Wildlife Habitat Incentives Program, which required the landowners to plant a 35-foot riparian buffer and maintain it for 15 years.

To date DEC has found that restoring the morphologically stable parameters of the river has resulted in effective sediment transport with minimal erosion. For example, before the restoration was completed, a 1- to 2-inch rainstorm would result in 5 to 10 feet of erosion along the bifurcated channel running through the agricultural lands. Some of the eroding land was being used to grow corn, and much of it was valuable agricultural soil. Since the project was constructed, there has been very minor bank erosion and no further loss of agricultural lands. In addition, the head-cuts that were moving upstream in 1998 have stabilized in place. Thanks to all the partners' efforts, the project's goals of preserving agricultural lands, stabilizing property values, and restoring the river's ecological and recreational values are being met.

Taking the Project to the Public

The DEC continues to take advantage of the project's educational possibilities. Throughout the project, local elementary, high school, and college students were involved in planting trees and implementing other restoration techniques. From this experience, students learned about the importance of trees on a streambank along with other aspects involved in maintaining a healthy river. Funding from the Five-Star Restoration program allowed the Department to train youth from a local youth conservation corps in restoration techniques and the need for river conservation, and the DEC has also led tours of the Trout River Project for school and community organizations throughout the region and state.

The Department, together with the U.S. Fish and Wildlife Service's Partners for Fish and Wildlife Program, the NRCS, and the Missisquoi River Basin Association, has worked to educate the community through newspapers articles and television programs. Funding and support from EPA allowed the DEC River Management Program to develop an educational video called "Unstable Rivers: Using a Geomorphic Watershed-Based Approach to River Restoration," which tells the story of the Trout River Project and the science of natural channel stability.

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

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Five-Star Restoration Projects Update

The goal of EPA's Five-Star Restoration Program is to bring together citizen groups, corporations, Youth Conservation Corps, students, landowners, and government agencies to undertake projects that restore streambanks and wetlands. The program provides challenge grants, technical support, and peer information exchange to enable community-based restoration projects. A few Five-Star Restoration projects are being revisited to see if the modest amount of funding (between \$5,000 and \$20,000) has helped the local restoration partners achieve their goals.

Project Name: Deep Creek Stream Corridor Habitat Restoration Project

Five-Star Grant: \$5,000

Grant to: Limestone Bluffs Resource Conservation and Development Area

Location: Maquoketa, Iowa

Original Project Description:

Limestone Bluffs Resource Conservation and Development Area will restore wetland and streamside areas of Deep Creek, a tributary to the Maquoketa and Mississippi Rivers. The project will be implemented in partnership with a private landowner, Future Farmers of America student volunteers, Clinton County, Pheasants Forever, Maquoketa River Alliance, Iowa Department of Natural Resources, the U.S. Department of Agriculture, and the U.S. Fish and Wildlife Service. The project will improve water quality in Deep Creek and provide important educational opportunities for area students and private landowners.

Update:

The Deep Creek Stream Corridor Habitat Restoration Project stabilized 600 feet of streambank and restored 1,320 feet of riparian habitat. Project partners stabilized three separate 200-foot sections of eroding streambank using rock and bioengineering methods. The new riparian buffer will protect the streambank by eliminating the effects of row crop production in close proximity to the stream and create diverse habitat for many wildlife species. Project partners continue to monitor water quality at Deep Creek. The streambank stabilization, combined with the riparian corridor restoration and elimination of row crop production next to the stream, is having a significant beneficial effect on water quality.

Outreach efforts included the development of information (including information and education materials on the conservation practices used and expected environmental benefits) and fact sheets on the Deep Creek project. This information was mailed to area landowners who have streams running through their property and might be experiencing similar erosion problems. Three radio stations broadcast information on the project, raising landowners' and watershed citizens' awareness of restoration issues. Information on the project also was distributed through local watershed newsletters.

Future work includes maintenance of the site, including vegetation and streambank stabilization structures. Project partners will monitor trees for disease and pest problems. They will also inspect the streambanks that were stabilized with rip-rap to ensure they are functioning properly. Native vegetation will be mowed as required, and weed competition will be minimized.

Project Title: East Bay Community Service-Learning

Five-Star Grant: \$25,000

Grant to: Alameda County Resource Conservation District

Location: Alameda County, California

Original Project Description:

The Alameda County Resource Conservation District, in cooperation with the Alameda County Service-Learning Partnership, the East Bay Regional Park District, the Alameda County Office of Education, and the Berkeley, Castro Valley, Hayward, New Haven, and San Leandro Unified School Districts, will expand an established classroom-based watershed education program to involve students in hands-on service-learning projects that protect and enhance creek habitats in their local watersheds. The current program reaches almost 6,000 students each year. The areas identified for the service project include several miles of creeks, some of them urban. This service-learning program will expose children from urban communities to the natural areas of

their watershed through projects that focus on native plant restoration, exotic plant eradication, wildlife and plant surveys, nest box installation, and fish habitat rehabilitation.

Update:

All students participating in the established programs gained an appreciation of the role of the National Wildlife Refuge (NWR) system in endangered species conservation while learning ecological principles through hands-on activities at the refuge and in their classrooms.

The partnership reached its first goal by adding a new field component to the existing classroom program and used the Alameda NWR as a teaching site. Twenty-two adult docents helped to conduct the program. In 1999 the project reached 1,970 Alameda students in 104 classes. About 490 fourth and fifth graders were taken onto the Alameda NWR for interactive, hands-on activities such as identifying plants, birds, bird calls, and insects.

The second goal reached was the initiation of a high school docent program at Encinal High School. The number of participants exceeded the numbers projected for the project. Twenty-six students received training as docents, and 60 students participated in an intensive Alameda NWR natural history course presented by a professor from the College of Alameda.

Participants were highly enthusiastic about the curriculum, and many students expressed a desire to participate again. Unfortunately, the first time around not everyone who wanted to participate as docents from Encinal High School was able. In fall 2000 the partnership hired a full-time program assistant and increased the capacity of the high school program.

Project Title: Elizabeth River Watershed Restoration

Five-Star Grant: \$5,000

Grant to: Elizabeth River Project

Location: Norfolk, Virginia

Original Project Description:

The Elizabeth River Project seeks to engage the local business community in wetland and habitat restoration in the highly industrialized and urbanized Elizabeth River watershed in southeastern Virginia. The project provides private landowners along the river with technical assistance and advice on habitat restoration plans for their property. The landowners then become part of a peer-evaluated certification process that ensures community recognition of the valuable environmental work these local businesses have provided. This project complements existing regional outreach and education initiatives throughout the Chesapeake Bay to engage small business owners and educate them about environmental protection while achieving tangible, on-the-ground restoration.

Update:

The Elizabeth River Watershed Restoration Project assisted with four restoration projects throughout southeastern Virginia. Elizabeth River staff assisted with a meadow planting for NOVA Chemicals, a wildlife habitat restoration for the Hampton Roads Sanitation District, a storm water wetland planting for the City of Portsmouth, and a saltmarsh protection project for Island Properties, Inc. The projects have protected or restored a combined total of 15.5 acres of natural habitat, meadows, and wetlands. Elizabeth River staff provided help with selecting and ordering native plants, monitoring vegetation growth, coordinating volunteer and event details, and developing interpretive signs for restored areas.

In addition to the technical expertise provided to restoration projects, the Elizabeth River Project has worked to raise community awareness. Approximately 350 people attended the State of the River 2000 conference, at which Elizabeth River restoration projects were highlighted. Expert speakers also educated attendees through the presentation of case studies and other restoration success stories. The Elizabeth River Project oversaw the creation of a 9-minute video highlighting wildlife habitat projects completed by businesses and homeowners and worked closely with the media to promote the Elizabeth River Project through numerous newspaper and newsletter stories.

For more information on EPA's Five-Star grant program, visit

<http://www.epa.gov/owow/wetlands/restore/5star/>.

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Community-Based Restoration Partnerships

Paint-a-thon Raises Money for Rio Grande Restoration

Every year Amigos Bravos, a nonprofit group dedicated to restoring New Mexico's rivers, brings together regional artists, art enthusiasts, and river conservationists for a Paint-a-thon and Gala Auction. Last year's Paint-a-thon on the Rio Grande, held in July, raised more than \$10,000 which will be used to fund projects to restore the Rio Grande and other New Mexico rivers. The 1-day fundraiser began with participating artists gathering along the river near the Taos Junction Bridge in Pilar. As the artists created their masterpieces along the river, volunteers handed out coffee, sandwiches, and ice cream donated by local businesses. Later in the evening, the event culminated with a Gala Auction as Amigos Bravos members, staff, volunteers, and other river conservationists gathered to bid on the more than 70 pieces of donated artwork. The money raised in this event will support current Amigos Bravos projects, including an effort to provide technical support to the community of Costilla, where local groups are working to restore the natural flows of the Rio Grande. Amigos Bravos is also working to restore habitat for the endangered silvery minnow and to prevent pollution caused by local industry. For more information on the restoration work being completed by Amigos Bravos, visit their web site at <http://www.amigosbravos.org/>.

Columbia River Sweep Removes 10,000 Pounds of Trash

August 25, 2001, marked a great day for the Columbia River. One hundred sixty volunteers retrieved 10,000 pounds of trash from the banks of the majestic Columbia River during the Columbia River Sweep. The impetus for this inaugural event began with one man's conviction to do something about the tons of trash collecting in and along the Columbia River. Scott Crosby, an avid sailor and member of the local sailing community, decided that rather than complain about the trash he would take action—and this year's low water levels made it the perfect opportunity for Scott to organize the Columbia River Sweep.

Through commitment and connections, Scott rallied local organizations and volunteers. Having never organized a river clean-up or been in contact with local river activists, Scott had many reasons to think the River Sweep would just be an idea. However, his commitment not to stop and a conversation with a friend who knew local river activists led him to the state nonprofit group SOLV, Columbia Riverkeeper, the Port of Portland, and local marinas. By working with these groups, Scott was able to increase public awareness of the clean-up and recruit numerous volunteers.

Scott offers encouragement for others to tackle restoration challenges, commenting "don't be stopped by fears or reasons—just be committed." The success of this year's cleanup has already generated interest and excitement for next year's Columbia River Sweep. For more information on Columbia River Sweep activities, contact SOLV, at P.O. Box 1235, Hillsboro, OR 97123; phone: (503) 844-9571; e-mail: info@solv.org; internet: <http://www.solv.org/>, or the Columbia Riverkeeper, at P.O. Box 82733, Portland, OR 97282; phone: (503) 727-2580; internet: <http://www.columbiariverkeeper.org/>.

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.

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Restoring Wetlands and Uplands at Cape Florida State Park

Bill Baggs Cape Florida State Park has undergone a tremendous change since August 24, 1992, when the center of Hurricane Andrew passed just south of Key Biscayne. The event devastated the park, leveling most of the vegetation, damaging the park's infrastructure, exposing and damaging archeological sites, and leaving the park inaccessible to the public for a year. Before the storm, exotic Australian-pine trees occupied more than 95 percent of the park. A year later, after the storm debris had been cleared, nearly 400 acres of the park had been bulldozed and almost all the park was left treeless.

For the natural resources of Cape Florida, the destruction of the Australian-pine forest was ultimately a benefit. It allowed the initiation of the ecological restoration of the upland portion of the park, a long term project that will reestablish the natural communities that once existed there: beach dune, coastal grassland, coastal strand, maritime hammock, freshwater wetland and tidal swamp. The restoration efforts are concentrated in two areas: the control of invasive plant species, both native and exotic; and the planting of native trees, shrubs, grasses, and forbs.

Since 1992 multiple county, state, and federal agencies have been involved in the restoration of Cape Florida, and tens of thousands of hours have been donated by local and out-of-state volunteers. More than \$7,000,000 of federal, state, and private grants have been spent. The American Littoral Society, a nonprofit organization, continues to be a valuable partner in the project, securing funds and volunteer resources.

To date more than 300,000 native plants have been installed and many more have self-propagated. In the restored plant communities, the park's native wildlife is flourishing and new species are being seen every year. Since 1994 more than 160 species of bird and 29 kinds of butterflies have been recorded in the park. Rare species such as the American crocodile and the peregrine falcon are now routinely spotted in the park. While much work remains to be done, Cape Florida nevertheless is an oasis of native habitats. The park, no longer overrun with invasive exotics, has now become a valuable environmental asset and a place where both people and wildlife can find refuge in the natural Florida. For more information on this and other restoration projects in Florida's state parks, see

<http://www.dep.state.fl.us/parks/ncr/successes.htm>.

Middle Waterway Restoration Continues

In fall 2001 the city of Tacoma, Washington, developed an estuarine shoreline wetland restoration project on the Middle Waterway within the city of Tacoma and Commencement Bay. The project was completed as part of a court settlement between local Indian tribes and the city of Tacoma/the Tacoma Public Utility that resolved Bay-wide claims for natural resource damage. By excavating and regrading 1.85-acres of vacant upland property, the city created an intertidal marsh and riparian buffer bordering one of the few remaining original mudflats within Commencement Bay. The project has created new habitat, enhanced existing habitat, provided buffers for the habitat, and provided public access for education and passive recreation.

This recent restoration project complements an earlier restoration project across the Middle Waterway, completed in 1995 by Simpson Tacoma Kraft Co. The 1995 project created the Middle Waterway Shore Restoration Project on a 5-acre site owned by Simpson on the northeast bank of the Middle Waterway. The project was developed in connection with a similar settlement that resolved claims of natural resource damages against the two companies. The Middle Waterway project reestablished more than 3 acres of intertidal, salt marsh, and riparian habitat. The companies excavated formerly filled land and contoured it to create a natural shoreline with hummocks and other natural marsh features, increasing the complexity, diversity, and habitat value of the waterway for shore birds, salmonids and marine fish, river otters, and area wildlife. The project also provided a partial buffer between the mudflats and adjacent upland industrial uses. For more information about this and other restoration projects, see

<http://www.darcnw.noaa.gov/mwe.htm>.

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@tetratex.com.

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Funding for Restoration Projects

New Listings:

Home Depot Grant Opportunities

Since 1993, Home Depot has granted millions of dollars to support a variety of environmentally focused nonprofit organizations throughout the communities they serve. Assistance is provided to nonprofit organizations that work toward protecting natural systems. Grants provided to environmental cleanup and recycling efforts could be used to fund river and wetland cleanup projects. Grant applications are accepted on an ongoing basis and can be downloaded from the Home Depot web site. To learn more, visit www.homedepot.com and click on "environment" at the bottom of the page. Look for information on environmental outreach and grants.

CF Industries National Watershed Award

The CF Industries National Watershed Award recognizes corporate and community excellence in watershed protection. Each year, one corporation and three communities nationwide are recognized for outstanding leadership in protecting America's water resources.

The award, administered by the Conservation Fund, focuses on innovative, nonregulatory approaches to improving water quality. Particular emphasis is placed on local partnerships that demonstrate the success of economic incentives, voluntary initiatives, and education.

To be eligible, programs must be working programs, not products or individuals, and must have been operating for at least 1 year. To apply, return one copy of the completed application form with evaluation letters from three references and one copy of your program narrative by June 1, 2002.

For more information, visit <http://www.conservationfund.org/?article=2332> or contact Beth Koonse at The Conservation Fund at (304) 876-2815.

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

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News and Announcements

Research Provides Encouragement about Productivity in Restored Wetlands

University of Rhode Island graduate student Mary-Jane James-Pirri, together with Narragansett Bay National Estuarine Research Reserve staff Kenneth Raposa and National Fisheries Service staff John Catena set out to answer a tough question: How do restored wetlands compare to undisturbed wetlands in ecological function?

To answer this question, the team studied Sachuest Point salt marsh in Middletown Rhode Island. In the 1950s the installation of a road and causeway constricted two thirds of the salt marsh from tidal flow. In 1998 a restoration project had restored tidal flow to the marsh, resulting in the growth of desirable vegetation and increased species density. It also provided an ideal research site containing undisturbed and restored areas within the same wetland.

James-Pirri collected 465 mummichog fish from 91 stations throughout the marsh. She then compared the diet and growth parameters of the mummichogs, a predatory fish common to salt marshes, from both the undisturbed and restored areas of the marsh. Analysis of the information gathered revealed that lengths, weights, gut fullness, and diets were similar in samples from restored and undisturbed marsh habitat. These results indicate that the semirestored marsh can provide similar energy resources and function like an unrestricted marsh.

Conservation Organizations Push for Changes in the Clean Water Act Funding Program

The reauthorization of the Water Quality Financing Act has sparked numerous discussions between Congress and conservation organizations. Conservation organizations, including American Rivers, Clean Water Action, and Natural Resources Defense Council, are encouraging Congress increase funding to reduce pollution by protecting natural areas along water bodies nationwide. In the past, the federal government provided money to states for "State Revolving Funds" (SRFs) under the Clean Water Act. Local governments could take out loans from the SRFs for wastewater, stormwater, and pollution reduction projects. However, according to the US EPA, federal spending has been less than 15 percent of the \$23 billion needed annually to replace aging water treatment infrastructure.

The Water Quality Financing Act of 2002, introduced on March 12, 2002, by Congressmen Duncan and DeFazio, would authorize \$20 billion in funding over 5 years and propose numerous changes in the Clean Water Act funding program. Senator Betsy Otto comments "The Water Quality Financing Act has some very good provisions, but Congress should pass some key reforms to the revolving loan funds to ensure that states lend the money for projects that maximize human health and environmental benefits."

Conservation groups, including the Natural Resources Defense Council, Clean Water Action, and American Rivers, would like to see several additional reforms including:

- Using a larger percentage of Clean Water SRF funds for natural techniques to address nonpoint source pollution, including stream buffers, wetlands protection, land conservation, and other habitat improvements along water bodies.
- Preventing SRF funds from being used to subsidize new sprawl development.
- Ensuring that money is used for the highest priority projects by strengthening provisions that require states to increase public input as they develop priority lists for projects and ensuring that SFR funds are used for those projects.
- Monitoring borrowers' use of the money by including language to ensure that SRF dollars are loaned to utilities that are making a good-faith effort to meet their Clean Water Act obligations.

To view the press release, visit <http://www.amrivers.org/pressrelease/cleanwater031302.htm>.
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Upcoming Conferences and Events:

NEW LISTINGS:

Minnesota Lakes and Rivers Conference

April 17–20, 2002

St. Cloud, Minnesota

This conference, offered in conjunction with Minnesota Water 2002, is sponsored by the Rivers Council of Minnesota and the Minnesota Lakes Association. The conference will focus on Minnesota's critical water issues. Plenary and breakout sessions will focus on changes in global conditions that affect research, planning, and management of Minnesota's waters. A keynote address will also be delivered by former Wisconsin Governor and U.S. Senator Gaylord Nelson, the founder of Earth Day. For more information contact the Minnesota Water Resources Center at (612) 624-9282 or thoma032@tc.umn.edu.

Toward Ecosystem-Based Management: Breaking Down the Barriers in the Columbia River Basin and Beyond

April 27–May 1, 2002

Spokane, Washington

The Columbia River is the dominant river system in the Pacific Northwest United States and southeastern British Columbia. Its health is of vital importance to communities and stakeholders on both sides of the border. Resource managers in Canada and the United States recognize that open, honest communication and effective information sharing are important foundations for resolving land- and water-use conflicts and are essential to economic and environmental sustainability in the Columbia Basin. This conference will enable participants to share new information, report on the progress that has been made on the transition toward ecosystem-based management and salmon recovery, build the partnerships necessary to implement effective strategic planning processes, and to renew a shared commitment to sustainability in the Upper Columbia River Basin. Visit www.sff.bc.ca/2002.html for more information, or contact Donald MacDonald, 2376 Yellow Point Road, Nanaimo, British Columbia V9X 1W5; phone: (250) 722-3631; e-mail: sff@island.net.

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PREVIOUS LISTINGS

Enhancing the States' Lake Management Programs: Managing Invasive Species in Lakes and Reservoirs April 23–26, 2002 Chicago, IL

State lake program managers, statewide lake associations, volunteer monitors, and federal and local managers are invited to this national meeting to discuss successes, evaluate obstacles, and explore new approaches for improving state lake management programs. This year's theme is invasive species and their management. Topics covered will include the Clean Water Act and

tools for watershed protection, troublesome aquatic invasive species, monitoring and assessment, and tools for building strong lake programs. For more information, contact Bob Kirschner, Chicago Botanic Garden, bkirschn@chicagobotanic.org, (847) 835-6837 or visit the web site <http://www.nalms.org/symposia/chicago/>.

EMAP Symposium 2001 April 24–27, 2001 Pensacola Beach, Florida

The Environmental Monitoring and Assessment Program Coastal Symposium 2001 is a 4-day symposium jointly sponsored by the EPA's Office of Research and Development (ORD) and the Council of State Governments. The symposium will provide a forum to present and discuss the results of successful programs. Federal, state, tribal, and academic scientists will be given the opportunity to develop new partnerships to advance the science of monitoring and assessing coastal resources. Topics for discussion at the symposium include:

- Coastal 2000's scientific programs and how they have met state and tribal needs.
- Partnerships between federal, state, tribal, and academic organizations in coastal research and monitoring.
- The achievement of more efficient, less expensive, and more scientifically rigorous monitoring and assessment.
- How research can lead to a better understanding of the roles of monitoring, assessing, identifying, diagnosing, and solving coastal problems.
- How academic research supported by ORD's Science to Achieve Results program has promoted the development of new ecological indicators for monitoring and assessing the condition of the coastal environment.

Third Annual Natural Stream Channel Design Summit April 25–27, 2002 State College, Pennsylvania

Sponsored by the Canaan Valley Institute, this summit will address topics such as permitting regulations, permitting resources, growing greener accomplishments, regional curve update, monitoring techniques, restoration in urban environments, cost-effectiveness, and minimizing impacts during construction. Invited speakers include Art Parola, Craig Fischeneck, and Rocky Powell. For more information, please contact Lesley Moore at (814) 768-9584 or lesley.moore@canaanvi.org.

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Restoration-Related Web Sites

<http://www.savethepeconicbays.org/>

Save the Peconic Bays, Inc. is a nonprofit 501(c)3 environmental organization created to foster protection, wise management, and enjoyment of New York's coastal waters along Long Island with special concern for the Peconic/Gardiner's Bay estuary system. *This site provides useful information on issues currently facing the bays and outlines the steps being taken to improve the state of the bays.*

<http://www.solv.org/index.shtml>

SOLV is a nonprofit organization that brings together government agencies, businesses, and individual volunteers in programs and projects to enhance the livability of Oregon. Currently planned projects include several beach cleanups and Team Up For Watershed Health, a program that mobilizes volunteers to complete watershed health-related projects. *This site provides contacts for*

anyone wishing to get involved in Oregon restoration projects, and could also provide useful information to other groups seeking to motivate volunteers.

<http://www.riversmn.org/>

Rivers Council of Minnesota is a nonprofit organization dedicated to helping Minnesotans keep their streams and rivers healthy. The organization seeks to complete this mission by connecting people with restoration projects, monitoring water quality, and encouraging conservation of riverside lands. *This site would be useful for anyone seeking information on river restoration in Minnesota or looking for encouraging stories of past successes.*

<http://www.bayjournal.com/02-03/invaders.htm>

Alien Invaders is a special feature presented in the *Alliance for the Chesapeake Bay Journal*. The article describes six common invaders to the bay and also provides a watch list of other problematic plants and animals becoming more prevalent in the Chesapeake Bay area. *This site would be useful for anyone interested in working to prevent destruction by alien species.*

<http://www.h2ouse.net/>

H2ouse, Water Saver Home is a web site dedicated to helping homeowners reduce water usage within their homes. *This site provides detailed information how to conserve water wherever it is used within the home.*

http://ceres.ca.gov/wetlands/geo_info/vernal_pools.html

Vernal Pools. This site, part of the California Resources Agency's Wetlands Information System, offers links to information about vernal pools—seasonally flooded depressions underlain by an impermeable layer such as hardpan, claypan, or volcanic basalt. *The site offers educational materials about vernal pools, California vernal pool locator maps, and a detailed vernal pool assessment report (complete with maps and species lists) prepared by the California Department of Fish and Game.*

<http://ciceet.unh.edu/>

The Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET). CICEET is a joint partnership between the National Oceanic Atmospheric Administration and the University of New Hampshire and is located on the UNH campus in Durham, NH. CICEET uses the resources of the University and National Estuarine Research Reserve System to develop and apply new environmental technologies and techniques. *This site provides reports and updates on new and cutting-edge environmental technologies that could be beneficial to restoration efforts.*

<http://www.nrcs.usda.gov/programs/wrp/>

Wetlands Reserve Program. The Natural Resources Conservation Service administers the Wetlands Reserve Program, a voluntary program to restore and protect wetlands on private property. This web site provides fact sheets, questions and answers, success stories, and contact information for the program.

This site provides information on how to get involved in the Wetlands Reserve Program and offers a wide variety of other wetland-related resources.

<http://www.crcl.org/>

The Coalition to Restore Coastal Louisiana was created to restore and preserve the delta ecosystem of the Mississippi River Delta. The coalition has raised awareness of the need to restore the delta; played a major role in selecting restoration projects under the Coastal Wetlands Planning, Protection, and Restoration Act; and worked to eliminate problems standing in the way of project completion. *This site provides information on getting involved in Louisiana coastal restoration and publishes newsletters and reports highlighting coastal restoration.*

<http://www.pugetsound.org/>

People for Puget Sound. This organization seeks to restore the Puget Sound to a clean and healthy sound, teeming with fish and wildlife, and cared for by the people who live near it. The members work toward accomplishing this goal by restoring habitat, speaking up for environmental protection, and gathering restoration facts. *This site would be useful for anyone seeking habitat information about the Puget Sound or looking to get involved in the restoration of the Sound.*

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

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Information Resources

The Winemaker's Marsh: Four Seasons in a Restored Wetland

by Kenneth Brower (2001)

In 1988, winemaker Sam Sebastiani began restoring 90 acres of hayfield near the San Francisco Bay to its natural condition as a freshwater marsh. Illustrated with vivid color photographs of the landscape and its wildlife, this volume chronicles a year in the life of this wetland, which is home to 156 species of birds and other wildlife. Hardcover copies are available for \$40 from <http://www.powells.com>.

Principles of Estuarine Habitat Restoration

Restore America's Estuaries (1999)

This 28-page handbook contains summaries of numerous estuary restoration principles. It also highlights case studies of completed restoration projects with contact information for agencies involved in the projects and future research and planning goals of Restore America's Estuaries. The complete document can be downloaded from <http://www.estuaries.org/>.

Wetland Plants: Biology and Ecology

By Julie K. Cronk and M. Siobhan Fennessy (2001)

This 488-page book contains a detailed account of the biology and ecology of vascular wetland plants. It provides a thorough discussion of the range of wetland plants adaptations to conditions such as life in water or saturated soils, high salt, or high sulfur, low light, and low carbon dioxide levels. The authors included the latest research on the development of plant communities in newly restored or created wetlands and on the use of wetland plants as indicators of ecological integrity and of wetland boundaries. The book can be ordered online at www.aswm.org/books/crc3727.htm.

The Environmental Grantmaking Foundations Directory

This directory provides valuable information for nonprofit organizations looking for grants to support environmental activities and programs. It lists 900 independent, community, and

company-sponsored foundations that fund environmental projects. These foundations gave more than \$600 million for environmental purposes last year. The directory provides company profiles with information on each possible funding source and is organized with multiple indexes to aid in the search for funding. For ordering information, visit www.environmentalgrants.com.

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