

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

Development Site Becomes Educational Center

Adapted from a California NRCS Press Release (Sept. 7, 2001)

Just in time for the new school year, 58.5 acres in Trinity County, California, have finally found their intended purpose—an educational and recreational wetlands for a mountain community. Thirty years ago the land was grazed and forested, although drainage problems kept it from being especially productive. In 1985 Trinity County bought the land with an eye toward developing an industrial park, but a determination by the Army Corps of Engineers that the site contained wetlands dampened that vision. Some parcels were sold for industrial purposes, but floods in 1997 on the property convinced officials not to sell the two remaining parcels.

In early September 2001 steps were taken to prove that the land's drainage problems actually held the key to their ultimate solution. The Trinity County supervisors received nearly \$30,000 from USDA's Natural Resources Conservation Service (NRCS) to reserve a portion of the Trinity Alps Business and Industrial Park site as a wetland management area. As a restored wetland, the

formerly troublesome spot will reduce nearby flooding, enhance water quality in nearby Weaver Creek, create habitat for wildlife, and increase local educational and recreational opportunities. The \$30,000 pays for a perpetual easement funded through USDA's Wetlands Reserve Program (WRP). NRCS is also providing 100 percent of the more than \$95,000 estimated cost to survey, design, permit, and reconstruct the site. NRCS and the Trinity County Resource Conservation District (RCD) are providing technical support for the project, including the design of the proposed wetland construction. "Although more than 60,000 acres have been restored through WRP in California, this easement is unique in many ways," says Interim State Conservationist Hank Wyman. "It's the first project owned by a county and the first project constructed with public education and recreation as primary objectives." Trinity County RCD Manager Pat Frost adds, "It is also the first WRP project done in a mountainous setting. WRP restorations are usually done on flatter farmland."

WRP is a voluntary program to restore and protect wetlands. The land must have an agricultural history and a high probability of successful restoration, including characteristics like natural flooding and a potential for habitat diversity. Typically, farmers or ranchers use WRP to retire marginal agricultural land while receiving financial compensation. The agricultural history of the Trinity site makes it eligible for WRP restoration, while its current ownership by the county opens the land to public access, providing a unique combination and use of the program. To see a copy of the NRCS press release see www.ca.nrcs.usda.gov/pa/acrofiles/news/nr090701.pdf [Link no longer available, October 2003]. (PDF)

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: Willamette Industries Wetland Restoration Project

Five-Star Grant: \$10,000

Grant to: North Central Pennsylvania Regional Planning and Development Commission

Project Location: Johnsonburg, Pennsylvania

Original Project Description:

The North Central Pennsylvania Regional Planning and Development Commission will work with at-risk youth from the surrounding six-county area to restore wetland and wildlife habitat on Willamette Industries property. Environmental education and job skills training will be part of the project. The project will be implemented in partnership with Willamette Industries, the Elk County chapter of Ducks Unlimited, and the U.S. Fish and Wildlife Service.

Project Update:

Willamette Industries consolidated sludge deposits that had been left by the former landowner in Dill Hill Lagoon to the northern portion of the lagoon. The topsoil lost during the consolidation process was replaced by a synthetic soil developed by Willamette Industries and made from by-products of the company's pulp and paper manufacturing process. Throughout the restoration project, Willamette Industries worked with the North Central Pennsylvania Regional Planning and Development Commission's Summer Youth Employment Training Program, the Pennsylvania Game Commission, Ducks Unlimited, and the U.S. Fish and Wildlife Service.

Beginning in summer 1999, students in the vocational program at Johnsonburg High School have planted more than 5,000 shrub species conducive to waterfowl in the synthetic soil in Dill Hill Lagoon. Volunteers from the Planning and Development Commission and Ducks Unlimited donate their time to build habitat boxes for ducks and blue birds. These boxes are placed around

the Dill Hill site and are used by migrating waterfowl and birds. The site is expected to be completely restored by summer 2004.

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

Restoring Monday Creek—One Day at a Time

Members of the Monday Creek Restoration Project are taking a multifaceted approach to watershed restoration and protection. Monday Creek, which is in the Appalachian Region of southeastern Ohio, is a 27-mile-long tributary of the Hocking River, which in turn flows into the Ohio River. Large sections of Monday Creek are severely impacted by acid mine drainage. Many sections are also suffering from streambank erosion.

The Monday Creek Restoration Project is a collaborative partnership of officials and residents of the Monday Creek watershed, along with more than 20 other organizations and state and federal agencies. Their shared goal is to restore the watershed for the benefit of local communities through efforts such as reducing acid mine drainage pollution, increasing public participation and awareness, preserving and enhancing riparian corridors, reducing sediment pollution, and reducing litter.

Many of the projects are long-term and offer education opportunities. For example, in 1997 volunteers from Hocking College and Rural Action, the Hocking Soil and Water Conservation District, Ohio EPA, and Ohio Department of Natural Resources-Division of Wildlife completed the first stage of a streambank stabilization project along a rapidly eroding portion of Monday Creek. In cooperation with a private landowner, they placed hardwood tree revetments at the toe of the bank and graded it back from a sheer 10-foot drop to a 2:1 grade. In the spring of 1998, students from Miller High School cut willow trees into posts and planted them at the site. The area was seeded with grass on top of the slope to prevent further erosion from occurring. Monday Creek Restoration Project participants continue to monitor the site today. So far, the vegetation has taken hold and is preventing additional erosion.

To further restoration efforts, over the past 2 years project volunteers have planted some 17,000 trees on more than 22 acres of abandoned mine lands and reclaimed surface with the hope of reducing erosion and revegetating the watershed. More than two hundred volunteers have planted a variety of hardwood trees, including ash, red oak, white oak, schumard oak, and sycamore, as well as pine trees, on several gob piles. Monday Creek Restoration Project participants also continue their efforts in many other areas of watershed protection. For more information see www.mondaycreek.org/index.html or contact Monday Creek Restoration Project, P.O. Box 129, New Straitsville, OH 43766. Phone: 740-394-2047; E-mail: mcrp@netpluscom.com.

Seventy-Three New Wetlands Dot North Dakota Rangeland

Proving once again that what is good for the environment is good for the community, government agencies, nonprofit organizations, and landowners have created 73 new wetland areas in southwestern North Dakota. The newly created wetlands range in size from a 1.7-acre pond to a 215-acre lake. Most of the wetlands are located in native rangeland areas and serve as prairie-wetland habitat for mallards, American wigeons, northern pintails, blue-winged teal, and Canada geese, as well as a stopover point for migrating shorebirds. Ranchers, who own most of the land containing the new wetlands, benefit from new sources of water for their livestock, and local construction companies received income from contracts to complete the restoration work. Downstream communities also benefit from reduced flood events, erosion control, and improved water quality—all thanks to the water-absorbing power of the wetlands.

The restoration project, called the North Dakota Great Plains Project has established more than 759 surface acres of shallow-water ponds and wetland habitat. In the future project partners plan to create more than 10,000 acres of wetlands in the southwestern North Dakota rangeland. The project has been made possible by a \$108,000 North American Wetlands Conservation Act grant in addition to \$414,000 in contributions from cooperating partners. The U.S. Fish and Wildlife

Service, Ducks Unlimited, Inc., North Dakota Game and Fish Department, North Dakota Wetlands Trust, and North Dakota ranchers all worked together to ensure the success of the project. For more information, contact Kevin Willis, U.S. Fish and Wildlife Service, 3425 Miriam Avenue, Bismark, ND 58501. Phone: 701-250-4403; E-mail: kevin_willis@fws.gov.

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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Achieving Restoration Results

Hickory Grove Fen Returning to Health

Hickory Grove Fen is returning to health, thanks to several state government organizations. A fen is a type of wetland that contains peat deposits (partly decayed plant material) and calcareous (calcium carbonate-containing) water seepage. Fens are usually sloped and often occur on hillsides where seepage and springs run from the ground. Hickory Grove Fen, a partially drained fen in McHenry County in northeastern Illinois, had been drained for many years by underground field tiles and aboveground ditches. Drained areas of the fen were covered with nonwetland vegetation, including thick growths of trees and shrubs, where herbaceous fen, marsh, and wet prairie plant species had formerly dominated. At the suggestion of McHenry County Conservation District personnel and with funding from the Illinois Department of Transportation, the Illinois Natural History Survey initiated a study to determine whether drainage effects could be reversed, with the goal of restoring wetland hydrology and habitat.

Restoration efforts, conducted in 1996 and 1997, included removing drainage tiles, filling ditches, and removing most woody vegetation. Water levels in some areas of the fen responded almost immediately, rising significantly. In fact, water level increases in portions of the restored fen were sufficient to satisfy the wetland hydrology criterion for jurisdictional wetlands.

Plant community restoration and development are also expected to continue. The fen was covered with thickets of buckthorn (*Rhamnus* spp.) and honeysuckle (*Lonicera* spp.) prior to restoration, plant communities have since made significant improvement. Although hydrologic restoration and plant community development are still in progress, the vegetation characteristic of a calcareous fen appear to be returning. In many areas where wetland hydrology has been restored, dominant hydrophytic vegetation typical of fen, marsh, wet prairie, and sedge meadow habitats now prevails. Wetland asters (*Aster simplex* and *A. puniceus*), bulrushes (*Scirpus* spp.), sedges (*Carex* spp.), Joe-Pye weed (*Eupatorium maculatum*), bugle weed (*Lycopus* spp.), and jewelweed (*Impatiens* spp.) commonly dominate these wet areas. Rare, high-quality wetland species typical of fen habitat, such as grass of Parnassus (*Parnassia glauca*), small fringed gentian (*Gentianopsis procera*), and Kalm's lobelia (*Lobelia kalmii*), also occur regularly. The Illinois Natural History Survey continues to monitor vegetation and hydrology to document additional hydrologic recovery. A corresponding development of existing plant communities should also occur, hopefully climaxing in a fully functional, high-quality fen community, a very rare Illinois habitat.

For more information, contact Brian Wilm, Illinois Natural History Survey, Center for Wildlife Ecology, Natural Resources Building, 607 East Peabody Drive, Champaign, IL 61820. Phone: 217-244-2176; E-mail: bwilm@mail.inhs.uiuc.edu.

Indian Boundary Park is Restored to a Healthy Urban Lagoon

Years of urban wear and tear had taken its toll on Indian Boundary Park, a 1-acre lagoon located in Chicago's far north side. The lagoon's small island and surrounding prairie area were overgrown with weedy tree and shrub species. The deep shade cast by the weedy vegetation prevented the growth of herbaceous ground cover, and without sufficient ground cover, the shoreline had become severely eroded. An overpopulation of waterfowl also limited the growth of native vegetation. In addition, the waterfowl population contributed to an elevated fecal coliform count in the lagoon.

The \$125,000 restoration project at Indian Boundary Park began on May 11, 2001. A contractor hired by the Chicago Park District drained most of the lagoon and excavated the shoreline. A

shallow marsh was created near the north end of the pond where water enters the lagoon. The natural filtering effect of the marsh will help filter urban pollutants from the runoff before it enters the lagoon. The contractor removed the woody shrubs from the island, leaving two weeping willow trees, and covered the remaining shoreline with an erosion control blanket. The sunny area created by the brush removal will allow the growth of native prairie and savannah plants. Nearly 100 native species were planted around the lagoon, including purple coneflower, New England aster, New Jersey tea, milkweed, cardinal lobelia, sweet flag, columbine, and wild onion. Aquatic areas were planted with arrowhead, bullrush and other native aquatic species.

The restored lagoon is showing signs of recovery. Shoreline plants are flourishing, and insects and wildlife, including dragonflies, turtles, and frogs, have returned to the lagoon. However, the excessive waterfowl population continues to be a problem. Ducks and geese have eaten many of the newly established aquatic plants. Currently the Chicago Park District is experimenting with Mylar tape, a polyester film that rattles and shines in the wind, as a form of waterfowl control. For more information, contact Doran Stambaugh, ServiceMaster Co., 1 ServiceMaster Way, Downers Grove, IL 60515. Phone: 312-907-2754.

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.

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Funding for Restoration Projects

New Listings:

Funding for South Florida Ecosystem Research and Modeling Program

The National Oceanic and Atmospheric Administration's Center for Sponsored Coastal Ocean Research/Coastal Ocean Program is soliciting 1-year and 2-year proposals to support coastal ecosystem studies in South Florida, including Florida Bay, the Florida Keys, the Florida Keys National Marine Sanctuary, and adjacent coastal waters. It will provide support for research and monitoring activities for the South Florida Ecosystem Restoration Prediction and Modeling Program, the South Florida Living Marine Resources Program, and the Florida Keys National Marine Sanctuary. The overall goal of this announcement is to fund high-priority research and monitoring needed to predict the impacts of Everglades restoration on the South Florida coastal ecosystem. Applications are due by 3 P.M. EST November 29, 2001. For more information see www.cop.noaa.gov/funding.html. For technical information contact Larry Pugh at 301-713-3338, ext. 160, or larry.pugh@noaa.gov. For general grant management information, contact Leslie McDonald at 301-713-3338, ext.155.

EPA Region 6 Wetland Program Development Grant Proposals

EPA Region 6 is soliciting proposals from state agencies, local governments, and tribes interested in applying for federal assistance for the State/Tribal/Local Government Wetlands Protection Development Grant Program under Clean Water Act section 104(b)(3), 33 U.S.C. 1254(b)(3) in Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. EPA Region 6 estimates \$1.2 million will be awarded to eligible applicants through assistance agreements. The state, tribal, or local government must provide a 25 percent match of the total costs of the project. Fifteen percent of the funding allocation will be targeted to support local and tribal initiatives. Proposals must be postmarked by November 30, 2001. For more information contact Sondra McDonald by telephone at 214-665-7187 or by E-mail at mcdonald.sondra@epa.gov, or see www.epa.gov/earth1r6/6wq/at/sttribal.htm.

Previous Listings:

Interagency Committee for Outdoor Recreation: Washington Wildlife Recreation Program

The Washington Wildlife Recreation Program (WWRP) provides funds for the acquisition and development of recreation and conservation lands. WWRP funds are administered by account and category. The Habitat Conservation Account includes critical habitat, natural areas, and urban wildlife categories; the Outdoor Recreation Account includes local parks, state parks, trails, and water access categories. For more information contact the Interagency Committee for Outdoor Recreation, P.O. Box 40917, Olympia, WA 98504; 360-902-3000; E-mail: info@iac.wa.gov.

National Environmental Education and Training Foundation

The National Environmental Education and Training Foundation (NEETF) awards 1-year environmental challenge grants for visionary and proactive environmental education and training projects that leverage resources and bring focus to the fields of environmental education and training. Grants are given to incorporated 501(c)(3) organizations only. Call 202-833-2933 to discuss proposal ideas or write NEETF, 1707 H Street, NW, Suite 900, Washington, DC 20006. Information is also available on the web site www.neetf.org.

NAWCA Small Grant

The U.S. Fish and Wildlife Service's Division of Bird Habitat Conservation in Washington is accepting North American Wetlands Conservation Act small grant applications through November 30. These grants are for requests of up to \$50,000 to benefit wetland habitats and migratory birds. Partnerships and non-federal matches are required. All information and application materials for this program are available at <http://birdhabitat.fws.gov>.

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

Star Grants Awarded for Invasive Species Research

Research grants totaling more than \$3.5 million have been awarded to seven universities and one nonprofit agency to study invasive species in the United States. Invasive species, such as the zebra mussel and the tamarisk tree, constitute irreversible environmental changes in ecosystems and have displaced many native plants and animals, causing one of the largest significant economic and natural resource losses.

The research will address issues related to plants and animals introduced into the United States and will help understand and minimize these losses. The grants were made through EPA's Science to Achieve Results (STAR) program, which funds research grants and graduate fellowships in numerous environmental science and engineering disciplines through a competitive solicitation process and independent peer review. The grant awards and the focus of the research projects are as follows:

- Cornell University, Ithaca, New York, "Impact of Invasive Plants on Abundance and Fitness of Salamanders."
- University of California, Davis, California, "The Hybridization Between an Invasive Exotic and a Declining Native Amphibian: Molecular Characterization, Ecological Dynamics, and Genetic Remediation."
- University of California, Riverside, California, "Abiotic Controls on Invasive Species and Biodiversity: Comparison of Forest and Shrubland."
- University of Florida, Gainesville, Florida, "Biopollution by the Green Mussel, *Perna viridis*, in the Southeast United States."
- University of Notre Dame, Notre Dame, Indiana, "Predicting the Identity, Spread, and Impact of Future Nonindigenous Species in the Great Lakes."
- Rice University, Houston, Texas, "Chinese Tallow Invasions into the Endangered Coastal Prairie: Causes and Consequences."
- State University of New York, Stony Brook, New York, "An Experimental Study of Biological Invasions in Forests of the Eastern United States."
- Interdisciplinary Solutions for Environmental Sustainability, Inc., Oak Ridge, Tennessee, "Predicting the Distribution and Dominance of Exotic Species Across Landscapes of Southern Appalachia."

For more information, contact Estella Waldman at 202-564-6836 or visit www.epa.gov/ncerqa.

Technical Resources for Reducing NPS Available

EPA has released a draft guidance (www.epa.gov/owow/nps/wetmeasures/) that is intended to provide technical assistance to state, tribal, and local program managers and others on the best available, economically achievable means of reducing nonpoint source pollution of surface and ground water through the protection and restoration of wetlands and riparian areas, as well as through the implementation of vegetated treatment systems. The deadline for comments is February 4, 2002. Comments may be sent to Christopher Solloway of EPA's Nonpoint Source Control Branch at solloway.chris@epa.gov.

Ballast Water Report Available for Comment

EPA's Draft Ballast Water Report is now available for comment. This report summarizes the results of study on aquatic nuisance species in ballast water discharges and recommends ways that EPA and other agencies can address the issue. The draft report is available at www.epa.gov/owow/invasive_species/petition.html. Comments must be submitted by January 11, 2002. For more information contact John Heisler at 202-260-8632 or Ruby Cooper-Ford at 202-564-0757.

Estuaries and Coastal Marine Waters Nutrient Guidance Available

The EPA nutrient criteria technical guidance manual for estuaries and coastal marine waters is now available for review. The manual provides guidance on how to develop numeric nutrient criteria for these waters but does contain site-specific information. The guidance, developed to help states and tribes establish criteria, contains scientifically defensible approaches for the development of regional nutrient criteria. The public is invited to provide scientific views of the guidance by December 10, 2001. Any information submitted should be adequately documented and contain enough information to prove that the information is likely reliable. The guidance is available at <http://www.epa.gov/waterscience/standards/nutrients/marine/marinefacts.html>. For more information contact David Flemer at 202-260-0619 or by e-mail at flemer.david@epa.gov.

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Upcoming Conferences and Events:

NEW LISTINGS:

The New York State Wetlands Forum 2001 Fall Meeting

November 16, 2001

Geneva, New York

Save the County Land Trust and Land Trust of the Saratoga Region will cosponsor "Wetlands: Capacity Building for NY Land Trusts." This one-day workshop is designed to guide land trusts in decisions in the acquisition and management of wetland resources in New York State. Land Trust staff managing wetlands and related aquatic resources will benefit most from this training workshop. Landowners and others are also welcome. The primary goal is to provide Land Trust staff with the information needed to acquire and manage wetlands. It is also expected to build awareness of partnership possibilities with local landowners, local government, and state and federal agencies. Registration is \$50 for NYS Wetlands Forum members and \$60 for all others. For complete information visit the workshop website at

www.wetlandsforum.org/conferences/2001fm.htm.

Electronic Workshop on Integrated Riparian Engineering

November 12— December 14, 2001

At the International Ecological Engineering Society's Conference in Christchurch, 4½ hours will be allocated over 3 days to this workshop. The workshop will discuss the engineering issues associated with riparian management, with particular emphasis on available tools and information, gaps in the available information, and how best to integrate technical engineering expertise with the planning and social aspects of riparian management. The electronic workshop allows those who cannot attend in person to participate in the workshop. Join the mailing list by E-mail by sending a message with the subject ET_FREJ, yourfirstname yourlastname, country to E-mail listserv@segate.sunet.se or visit the website <http://segate.sunet.se/archives/et-frej.html>. For more information, visit http://events.lincoln.ac.nz/iees/Riparian_engineering.htm [link no longer available, October 2003] or e-mail foo@biotech.kth.se.

Virginia Coastal Partners Workshop

December 5–7, 2001

Williamsburg, Virginia

Instead of a lecture format with concurrent sessions, this conference will emphasize an interactive approach to coastal management. Sponsored by the Virginia Department of Environmental Quality, this conference will explore the current status and trends of Virginia's coastal resources. Five discussion sessions will focus on the topics of Water Quality and Quantity, Coastal Habitats, Fish and Wildlife, Public Access, and Coastal Planning and Development. For registration information, contact Laura McKay at 804-261-9530 or lmcckay@deq.state.va.us.

River Short Courses 2002

Wildland Hydrology is offering five interrelated courses throughout 2002. The courses start with "Applied Fluid Geomorphology," which familiarizes students with river behavior. Other courses offered include "River Morphology and Application," where students learn to delineate streams; "River Assessment and Monitoring," a class which is about streambank stability, reducing sediment, riparian vegetation, and stream stability; "River Restoration and Natural Channel Design," focusing on restoration design; and "Fluvial Geomorphology for Engineers" a class designed to show engineers how to design projects that include consideration of environmentally sensitive and sustainable areas. The courses run for 9 days and cost between \$1,450 and \$2,500. Registration forms are available at the web site www.wildlandhydrology.com or from Wildland Hydrology Inc. at 970-731-6100 or wildlandhydrology@pagosa.net.

PREVIOUS LISTINGS

Sixty-third Midwest Fish & Wildlife Conference: Transitions in the Conservation Landscape

December 9—12, 2001

Des Moines, Iowa

This conference will focus on changes in habitat, especially fragmentation and biodiversity; how natural resource agencies have responded to the change; and how to protect resources for the future. Several general sessions scheduled throughout the conference will address wetland-related concerns. For registration forms and more complete information, visit the conference web site at www.state.ia.us/midwest2001.

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

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Restoration-Related Web Sites

Let us know about your restoration-related web site. Please send relevant URLs to restorationupdate@tetrattech-ffx.com. www.cityofchicago.org/Environment/Rivertour/

The City of Chicago's Department of the Environment has created a web site celebrating the Chicago River. "The Chicago River Tour" offers general information about the river, as well as specific descriptions of river restoration projects. Web site visitors can enjoy a video and filmstrip tour of the river. The site also offers a special section that includes games for students and project ideas for teachers. This site would be useful for anyone interested in urban river issues.

www.awag.org

The Arkansas Watershed Advisory Group assists interested citizens and organizations by promoting local voluntary approaches to watershed management and conservation. Their web site offers a slide show detailing their many watershed restoration projects. This site would be useful for anyone interested in ongoing watershed restoration efforts.

www.epa.gov/greenacres/

This EPA web site explains how to landscape with native wildflowers, wetland plants, and grasses to improve the environment. Although targeted for the Great Lake States, this web site would be useful for anyone interested in incorporating native plants into a landscape.

www.cln.org/themes/wetlands.html

The Community Learning Network offers a web site designed to help K to 12 teachers integrate technology into the classroom. The site provides more than 5,800 annotated links to educational sites with free resources, all organized by theme pages and keyword search. The wetland theme page offers two types of resources: (1) curricular resources (information, content) to help users learn about wetlands and (2) instructional materials (lesson plans) to help users teach about wetlands. This site would be useful for anyone looking for education materials about wetlands.

<http://www.vims.edu/welcome/tour/tmarsh/>

The Teaching Marsh at the Virginia Institute of Marine Science (VIMS) is a 1-acre site restored to marshland for both practical and educational purposes. The Commonwealth of Virginia has charged the Wetlands Program at VIMS to educate various interest groups, such as local wetland boards, about the functions and values of tidal wetlands. The web site offers a series of photos showing the site before and after restoration, as well as photos of the types of wetland plants used in the restoration. This site would be useful for anyone looking for photos of wetland plants and examples of marsh restoration.

www.iawetlands.iastate.edu/

This web site serves as a clearinghouse of information about wetlands and riparian areas in Iowa. The site includes a description of the Iowa Wetlands and Riparian Areas Conservation Plan, as well as general information about wetlands and riparian areas. A series of case studies are included to demonstrate the types of protection and restoration efforts that are taking place in Iowa. A kids' page offers enjoyable learning opportunities. The site would be useful for anyone looking for wetland education and communication ideas, as well as people looking for information relevant to Iowa.

www.greenworks.tv/waterquality/dennis_crk.htm

Learn how the people of Dennis Creek, Franklin County Pennsylvania, decided to save their 14-square-mile watershed, which drains into the Potomac River. A partnership of farmers, local officials, students, and residents installed stream bank fencing and built replacement wetlands and streamside buffers. They also developed nutrient management plans for farms and started a stream monitoring program. This 15-minute GreenWorks for Pennsylvania television episode, "Pollution: Solutions and Results," is available for download.

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Information Resources

Vermont Produces Stream Restoration Videos

The Vermont Department of Environmental Conservation produced two videos that deal with stream corridor restoration. "When Rivers Become Unstable" deals with how streamside woodlands help protect land and reduce erosion, and "Unstable Rivers" demonstrates a geomorphic watershed based approach to river restoration. For more information or to order the videos, call the VTDEC Water Quality Division at 802-241-3770.

Illinois Wetland Posters Available

The Illinois Natural History Survey is selling "Northern Bog" and "Cypress Swamp" posters. Each poster is 18 inches by 24 inches and costs \$4. To view the poster and to download an order form, see www.inhs.uiuc.edu/chf/pub/surveyreports/spring-01/fposter.html.

Service-Learning Model Program Replication Guides

Each of these guides offers day-by-day lesson plans for replicating one of 10 model service-learning programs. These model programs are actual programs being implemented by teachers in schools throughout Maryland. They were written by the model program teacher and include materials needed for successfully replicating the projects. The guides available, include "Create an Outdoor Classroom: Stream Restoration and Maintenance" and "Serving Historic Sites and the Environment: Adopt a Wetland." For more information and to order copies (\$25 each), see the Maryland Student Service Alliance's web site at www.mssa.sailorsite.net/curric2.html.

Wetland Protection Guide: A Citizen's Guide to Wetland Protection Before and After the Bulldozer Arrives

by Jennifer Thomas and Dee Arntz, 1997

This document, available on-line (<http://wa.audubon.org/wetnet/bdozer.htm>), is designed as both a road map and a tool box for everyone interested in wetland protection in the state of Washington. It offers general information about wetlands, describes the laws and regulations that can be used to protect wetlands, identifies the players in the land use process and their roles, and presents the strategies and tools needed to be an effective player in the wetland protection process.

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