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WATERSHED EVENTS

FALL 1997

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This issue of Watershed Events focuses on the American Heritage Rivers initiative announced by President Clinton in his State of the Union Address in February of this year. Follow-up articles will be printed in future versions.

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President Announces American Heritage Rivers Initiative

"Let the nominations begin!" announced President Clinton on September 11, 1997, as he opened the nominations process for American Heritage Rivers. First announced in his 1997 State of the Union Address, the goal of the American Heritage Rivers initiative (AHR) is to support community-led efforts that foster natural resource and environmental protection of rivers, spur economic revitalization, and preserve our historic and cultural heritage.

Rivers have always been an integral part of our nation's history-providing food and water, routes for exploration and discovery, wildlife habitats, transportation corridors for trade and commerce, inspiration for artistic expression, opportunities for recreation, and focal points for community development. A river often defines the distinctive character of a community. To capture or restore that distinctive character, many communities across America are working to develop or restore their waterfronts in an environmentally

sensitive manner and to protect the ecological, economic, historic, cultural, and recreational values of their rivers. The AHR initiative will support these efforts by (1) recognizing exemplary models and (2) improving information and services for all communities.

American Heritage Rivers Receive Focused Support

After a community or regional group nominates its river, a "blue ribbon" panel of experts will review the applications and make recommendations to the President. In the first year, the President will recognize 10 rivers, or sections of rivers, as American Heritage Rivers. By selecting American Heritage Rivers, the President will celebrate outstanding community-led efforts and assist them in revitalizing their rivers. According to the needs identified by the communities, American Heritage Rivers will receive tailored access to selected technical and financial assistance as well as expedited delivery of existing federal programs authorized for these purposes.

A "River Navigator" will work with each community to help access and coordinate federal support according to its needs. Federal agencies will commit field staff and resources, as requested by the community, to each American Heritage River. These experts will work with the River Navigator and the community to apply technical information to specific situations, interpret the results, and take appropriate actions. Federal agencies will renew their commitments to act as "good neighbors" toward these communities by engaging in partnerships with community members and informing them of any federal actions that might affect them.



How to Nominate a River

The nomination process begins with the local community. People who live and work in the area being nominated and represent all the different interests should be part of the process. After meeting to identify common goals, and to develop a strategy to achieve those goals, the group is ready to submit an AHR nomination package. This package must include the following information:

1. A description of the proposed American Heritage River area, including its natural qualities, current uses, population patterns, and topography.
2. A description of the notable resource qualities in the area, and how the natural, economic, scenic, historic, cultural, and recreational resources are distinctive or unique.
3. A description of the community's plan of action to achieve its vision for the river area including natural resource and environmental protection, economic revitalization, and historic and cultural preservation.
4. A description of who supports the nomination and plan of action and evidence that all citizens of the community had the opportunity to comment on the nomination and plan of action. Supporters should reflect the various sectors of the community including landowners, business and community leaders, environmental groups, educational and arts organizations, and farmers and ranchers. Letters of endorsement and support-especially from state, tribal, and local governments-are highly recommended.

(Note: Responses to items 3 and 4 constitute the primary basis for evaluating nominations.)

Applications will be judged by a diverse group of experts who form the American Heritage Rivers Council. In addition to evaluating individual nominations, the Council will consider the following criteria when making their recommendations to the President:

- The 10 rivers, as a group, represent the natural, historic, cultural, social, economic, and agricultural diversity of American rivers.
- The 10 rivers should showcase a variety of stream sizes and a variety of rural, urban, and suburban settings from around the country.
- The 10 rivers highlight a variety of innovative programs in such areas as historic preservation, wildlife management, fisheries

protection and restoration, recreation, community revitalization, agricultural practices, and floodplain and watershed management.

- Community partnerships supporting the river nomination may be in the early stages of development or well established.
- The communities in each of the 10 river areas desire and will benefit from targeted federal assistance.

Special Benefits for Those Who Nominate a River

The people who invested time to learn about and work on the AHR nomination package have already taken an important step to protect and restore their river, preserve historic and cultural resources, and provide for economically viable waterfronts. In recognition of their efforts, those who submit a complete nomination: (1) will receive an invitation to a national or regional symposium where they can meet with other AHR applicants, share information, learn more about available resources, and have the opportunity to give important feedback to federal program managers and (2) will be provided site-specific data and community planning software and economic modeling tools, environmental information, and geologic and other relevant maps. This information will be tailored to meet the community's needs as identified in its application.

In Conclusion . . .

With the American Heritage Rivers initiative the President will recognize communities that have taken the initiative to protect water resources and public health, restore ecological integrity, improve waterfronts, preserve historic and cultural resources, and work toward sustaining the local and regional economy. It has only been in recent years that we have come to realize that these goals are mutually compatible-and often interdependent-and achieving them will improve the quality of life for all the people along American Heritage Rivers. AHR rivers and their surrounding communities will likely serve as models of innovative, successful, and sustainable approaches to river protection and restoration for communities throughout the Nation for years to come.

For more information, including nomination forms, see the website at <http://www.epa.gov/rivers>. Those without Internet access who wish to obtain information from the Services website or request a nomination form may call the AHR Hotline at 1-888-40RIVER.

Improved Information for All Communities

The American Heritage Rivers Services web site www.epa.gov/rivers/services/ consolidates existing information from many agencies and organizations. Users may choose from categories such as:

Information Centers, Publications, Maps, and Databases
Calendars, Discussion Groups, and Contacts
Hands-on Assistance and Talent Banks
Laws and Regulations
Financial Assistance
Community Outreach Tools and Professional Training
Data Collection and Evaluation Techniques
Planning and Management Tools
Research and Development

Each entry describes the services and provides contacts for further information.

"A river is more than an amenity...it is a treasure"
Oliver Wendell Holmes

Corps Programs to Support President's American Heritage Rivers Initiative

The U.S. Army Corps of Engineers (Corps) will play an active role in support of the President's American Heritage Rivers (AHR) initiative. Consistent with the AHR initiative goal of maximizing the use of already existing financial and human resources and expertise, several Corps programs have been identified to assist communities along the designated rivers in protecting, restoring, and managing a variety of water resources. Four of these programs are highlighted below.

The Section 1135 Program, authorized by the Water Resources Development Act (WRDA) of 1986, as amended, allows the Corps to modify existing water resources projects constructed by the Corps for the improvement of "environmental quality in the public interest" (i.e., environmental restoration). Nonfederal sponsors are responsible for 25 percent of the project cost and usually 100 percent of operation and maintenance. The federal per project limit is \$5 million, and the annual appropriation limit is \$25 million. One example of an 1135 project currently under way is an existing dam site in Arkansas that will restore flows to an area cut off when the dam was constructed, restore shorelines, and build fish shelters.

The Beneficial Uses of Dredged Material Program (section 204 of WRDA 1992) authorizes the Corps to undertake projects to protect, restore, and create aquatic and ecologically related habitats, including wetlands, in connection with dredging of authorized navigation channels. Nonfederal sponsors are responsible for 25 percent of the project cost and 100 percent of operation and maintenance. The annual appropriation limit is \$15 million. In a recently completed 204 project in Louisiana, dredged materials were used to retard erosion, repair an overwash beach area, protect 125 acres of wetlands, and create 77 acres of new wetlands.

The Aquatic Ecosystem Restoration Program (section 206 of WRDA 1996) authorizes the Corps to engage in aquatic ecosystem restoration projects that will improve the quality of the environment, are in the public interest, and are cost-effective. Nonfederal sponsors must contribute 35 percent of the construction cost and 100 percent of operation and maintenance. The federal per project limit is \$5 million, and the annual appropriation limit is \$25 million. No projects have yet been initiated under this new authority.

The objective of the Flood Plain Management Services Program, authorized by section 206 of the Flood Control Act of 1960, is to foster public understanding of the options for dealing with flood hazards and to promote prudent use and management of the Nation's floodplains. Technical assistance and planning guidance (at 100 percent federal cost) are provided at the request of states and local governments to help them reduce potential flood damages. For example, in Minnesota, a flood analysis was conducted as the basis of re-mapping the 100-year floodplain in order to help the city better plan for and manage the floodplain throughout the city.

For more information on the Corps's contribution to the AHR initiative, contact Chuck Moeslein, CECW-PC, Planning Division, US Army Corps of Engineers, 20 Massachusetts Avenue, NW, Washington, DC 20314, (202) 761-8534.

American Heritage Rivers An Opportunity for Synergy of DOI Programs

The community-based focus of American Heritage Rivers has brought together a remarkable array of people, programs, and services at the Department of the Interior (DOI). The seven agencies-the Geological Survey (USGS), National Park Service (NPS), Fish and Wildlife Service (USFWS), Bureau of Land Management (BLM), Bureau of Reclamation (BOR), Office of Surface Mining Reclamation and Enforcement (OSMRE), and Bureau of Indian Affairs (BIA)-have a long history of providing people from the federal government to work with citizens across the country who are protecting their communities' natural and cultural resources. Chris Brown, of NPS' Rivers, Trails, and Conservation Assistance program, offered a vision for American Heritage Rivers at the first meeting of a team of DOI's agency representatives: "Interior's partnerships have already had an impact throughout the country, but this new focus may offer a historic opportunity to get many of our agencies working together on one river."

Building on recent work completed for a DOI initiative to support locally led watershed projects, a team of agency representatives has identified several dozen programs that offer services that will be useful to designated American Heritage Rivers, including the following:

- Water conservation planning assistance, education programs, and demonstration projects from the BOR's Water Conservation Field Services program.
- Habitat restoration assistance from the USFWS' Partners for Wildlife program.
- Assistance in mitigating acid mine drainage from OSMRE's Abandoned Mine Reclamation program.
- Planning assistance from NPS' Rivers, Trails, and Conservation Assistance program.
- Financial assistance for control of invasive species from BLM's Partners Against Weeds program.

AHR is a unique opportunity to spotlight these programs, to help communities find new ways to use them, and to identify where implementation of more than one program leads to new, more efficient and responsive ways of doing business. For more information, contact Jennifer Pitt, National Park Service, Main Interior Building, M.S. 3611, Washington, DC 20240; (202) 565-1185.

American Heritage Rivers A Framework for Integrating EPA Programs

The AHR initiative provides a unique opportunity for EPA to directly assist communities in their efforts to protect and enhance the water quality and ecological health their rivers. By providing local communities with financial and technical assistance, goals of the Clean Water Act can be attained relative to protecting and restoring the integrity of their river so that people can continue to, or once again, enjoy fishing, swimming, and boating in their own neighborhood or town.

A number of EPA programs and grants can work in an integrated fashion to assist communities along designated American Heritage Rivers. The Wetlands Grants Program assists states, tribes, and local governments in developing wetland protection programs, protecting watersheds and river corridors, and facilitating wetland restoration. Sustainable Development Challenge Grants provide seed funds to leverage private and public sector investments to encourage cooperation among community organizations, business, and governments to work together to achieve economic and environmental sustainability. Nonpoint Source Pollution Grants fund projects to reduce nonpoint source pollution into surface and ground waters and to assist in building the long-term capacity of state, tribal, and local governments to address nonpoint source pollution. Brownfields Economic Redevelopment Assessment Pilots, selected through a national competition, bring together community groups, investors, lenders, developers, and other affected parties to address the issue of assessing sites contaminated with hazardous substances and preparing them for appropriate, productive use. Finally, Surf Your Watershed, an Internet program, helps people locate and use specific environmental, geographic, and other pertinent information about their watershed.

The American Heritage Rivers initiative complements and supports the widely endorsed watershed approach in several ways. First, communities associated with designated American Heritage Rivers will serve as models of how economic, environmental, and historic preservation goals can be mutually compatible and beneficial to the community and region. Their success will encourage and support other communities in their efforts to restore and maintain the water quality and ecological integrity of their rivers, streams, lakes, and other waters. Second, AHR initiative services will improve accessibility to a wide range of federal programs to protect riverine resources that can benefit all communities.

For more information about these and other EPA programs, contact Janet Pawlukiewicz, Office of Wetlands, Oceans, and Watersheds, 401 M Street, SW (4501F), Washington, DC 20460, (202) 260-9194.

Tennessee Valley Authority Supports Communities for American Heritage River Recognition

TVA's Clean Water Initiative (CWI) is committed to the goal of ensuring that the rivers, lakes, and streams support the beneficial uses defined by water resource users and the people living in the watersheds, and building community responsibility for sustaining implemented improvements. Watershed-based and partnership-driven, CWI helps communities learn how to focus on problem solving to meet common goals; accomplish more with less by pooling technical, financial, and personnel resources; and develop strategies for long-term continuation of water quality improvements.

CWI is prepared to support community-led efforts to receive American Heritage River recognition for communities' significant and valued river resources through the following:

- Sharing of monitoring data collected to assess resource conditions in their watersheds.
- Watershed mapping and modeling.
- Working cooperatively with communities to identify opportunities for improvement.
- Helping to develop the partnerships with residents, businesses, nongovernmental organizations, governments, and federal, state, and local agencies that can take ownership of these opportunities.

All those working toward American Heritage River designation look forward to exciting new federal/public/private partnerships that will ultimately benefit the natural and cultural resources of our land and its people. For more information, contact Linda B. Harris, TVA Clean Water Initiative, 400 West Summitt Hill Drive, WT 10-D, Knoxville, TN 37902-1499, or call (423) 751-6453.

Role of NRCS in the American Heritage Rivers Initiative

The U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), provides technical and financial assistance for conservation on private land through a variety of conservation programs in partnership with 3,000 local conservation districts. This partnership is supported by personnel and funds provided through the NRCS Conservation Technical Assistance (CTA) program. It is carried out under memorandums of understanding between the Secretary of Agriculture and local conservation districts.

NRCS provides assistance through the districts to landowners, land users, communities, watershed groups, federal and state agencies, American Indian tribes, and others at their request. Much NRCS assistance is provided by watershed area.

To urban and rural river communities NRCS can provide assistance with assessing the condition of natural resources, setting goals for improving or protecting natural resources, and developing a plan for reaching the goals communities set for themselves. NRCS can help river communities with addressing water quality concerns, revegetating eroded streambanks, establishing vegetative buffer strips, restoring and protecting wetlands, restoring and creating wildlife habitat, creating economic development opportunities in rural communities, developing recreation opportunities, and restoring waterways damaged by flooding, and with a variety of other natural resource concerns.

NRCS administers and participates with other USDA agencies in carrying out several programs that can help landowners address natural resource concerns mainly on agricultural lands. They include, but are not limited to, such programs as the Conservation Reserve Program, the Wetlands Reserve Program, the Farmland Protection Program, the Forestry Incentives Program, Watersheds Operations (Small Watershed Program and Flood Prevention Program) Program, and the National Conservation Buffer Initiative (**see article on Page 9**).

A new option on agricultural land authorized by the 1996 Farm Bill for the Emergency Watershed Protection (EWP) program gives producers the opportunity to offer their land for a floodplain easement. To be eligible, the land must have been damaged by flooding to the extent that the cost of restoring it and associated structures would be greater than the value of the land after restoration. The easements provide permanent restoration of the natural floodplain hydrology as an alternative to traditional attempts to restore damaged levees, lands, and structures.

For more information on the assistance available from NRCS to American Heritage Rivers communities and all river communities, contact Jack Frost by phone at 202-720-9483, by fax at 202-690-1462, or by e-mail at jack.frost@usda.gov.

Historic Preservation and The American Heritage Rivers Initiative

Much of America's history is told by its rivers and the landscapes through which they run. We are stirred by memories of exploration, enterprise, wartime struggle, and peacetime pursuits along our rivers. The physical remnants of past river settlements, and the buildings and structures that mirror the development of those places into today's modern towns, cities, and waterways, constitute some of the Nation's most important and distinctive heritage. In an age where one community and region of the country increasingly looks just like another, at least superficially, the ability of America's rivers and their associated historic properties to instill a sense of place, community identity, and civic pride cannot be overemphasized. The environmental protection of our waterways in and of itself, while undoubtedly of critical importance to our quality of life, is not enough. Distinctive river features—ferries and bridges, locks and dams, docks and warehouses, mills and powerhouses—also deserve careful consideration and attention as communities reassess their river assets and work together to promote a more satisfying and prosperous future.

The Advisory Council on Historic Preservation, an independent agency created by Congress in 1966 to provide leadership in the national historic preservation program, will work closely with the other federal partners under the American Heritage Rivers umbrella to help ensure that this need is met. The Council will provide technical expertise; direct designated river communities and other groups seeking assistance to sources of information, funding, and program support to meet their goals; and advise other public and private entities about historic preservation needs and priorities. The Council will also make certain that the "good neighbor policy" espoused in support of the American Heritage Rivers initiative, which directs federal agencies to consider community plans and objectives in making project and permit decisions, is explicitly addressed and used through the planning and protective process for historic resources established by Section 106 of National Historic Preservation Act.

Finally, the Council will help coordinate contributions to the initiative from the rest of the national historic preservation community, which includes the National Park Service; other federal agencies with preservation-related programs or grant support (e.g., HUD's community development assistance); the State Historic Preservation Officers in each state and territory; Certified Local Governments with local preservation programs; Tribal Preservation programs; and the National Trust for Historic Preservation as well as other

preservation-oriented organizations throughout the country.

The American Heritage Rivers initiative gives us mechanisms to improve the delivery of federal services and programs based on what communities believe can best meet their own needs. We believe this initiative can help to enhance local and regional economies, as well as protect the environment, while at the same time protecting and capitalizing on an area's important historic and cultural assets.

"When we try to pick out anything by itself, we find it hitched to everything else in the universe."

John Muir

In Other News . . .

EPA Proposes Future Funding for Water State Revolving Funds

EPA's Office of Water has developed a plan to capitalize the Clean Water and Drinking Water State Revolving Fund (SRF) so that, on a national basis, they will generate average annual assistance at a level of about \$2 billion and \$500 million, respectively. The Agency's proposed capitalization schedule, which extends through FY 2003 for each program, represents efforts to fund the Clean Water and Drinking Water SRFs so that they will provide a perpetual source of financial assistance for high-priority water quality and public health projects. These projects can include new, innovative water quality improvements such as nonpoint source pollution controls and other nonstructural efforts. For more information on the SRFs, call (202) 260-7359 or by e-mail at srfinfo@epamail.epa.gov

Top Ten Watershed Lessons Learned: Insights That May Help Your Watershed

EPA has just completed a publication, Top Ten Watershed Lessons Learned, that will help you to better protect and manage your watershed. EPA has been working in partnership with many other organizations over the past few years to facilitate implementation of the watershed approach. Much has been accomplished. For example, there are now over 1,000 watershed partnerships listed in the Know Your Watershed national database. But there is more to do to achieve the goal of 2,000 partnerships by the year 2000.

Realizing that people have a lot to share, EPA convened an advisory group consisting of 20 key partners such as River Network, Know Your Watershed, and the Center for Watershed Protection who all brainstormed on the top ten lessons they've learned. That list was circulated and improved with the insights of some 100 other watershed practitioners across the country who offered their own experiences to illustrate each lesson. If you would like a free copy of Top Ten Watershed Lessons Learned, call 1-800-490-9198 and ask for EPA840-F-97-001. To share your lessons learned, contact Ben Ficks, U.S. EPA, 401 M Street, SW (4501F), Washington, DC 20460, (202) 260-8652, or ficks.ben@epamail.epa.gov (e-mail).

Watershed Lessons Learned at a Glance

1. The best plans have clear visions, goals, and action items.
2. Good leaders are committed and empower others.
3. Having a coordinator at the watershed level is desirable.
4. Environmental, economic, and social goals are compatible.
5. Plans only succeed if implemented.
6. Partnerships equal power.
7. Good tools are available.
8. Measure, communicate, and account for progress.
9. Education and involvement drive action.
10. Build on small successes.

EPA's Watershed Academy Promotes the Watershed Approach Through Training and Publications

EPA's Watershed Academy provides training and information on implementing the watershed approach to local, state, tribal, and federal officials and private practitioners of watershed management. The watershed approach is a coordinating framework that focuses

efforts on addressing the highest priority problems within a watershed, i.e., a hydrologically defined geographic area. For 2 years, the Watershed Academy has provided technical information and outreach on the watershed approach through training courses, direct technical assistance, an Internet website, and publications. The Watershed Academy consists of four key components:

- Training courses on topics ranging from how to organize at the state level to implement the watershed approach to a primer on technical tools.
- Information Transfer Series, which includes a catalogue of more advanced training opportunities and numerous other documents that highlight institutional/organizational and technical aspects of implementing the watershed approach. (These documents are listed below.)
- State Facilitations, through which the Academy assists states in reorienting their water resource management programs to implement a watershed approach. (To date, the Academy has assisted agencies in 20 states.)
- Website/Academy 2000, through which most of the information mentioned above is made available on the Internet. The website includes a distance learning program called Academy 2000 to help serve the training needs of those who cannot attend the live courses. The first training module, "Monitoring Consortiums," is now up on the website. The address is <http://www.epa.gov/OWOW/watershed/wacademy.htm>

Watershed Academy Documents

The Watershed Academy has published the following documents on different aspects of the watershed approach through its Watershed Academy Information Transfer Series.

- Catalogue of Watershed Training Opportunities (EPA841-D-97-001) - includes descriptions of 75 EPA and non-EPA courses and dates for the courses.
- Top Ten Watershed Lessons Learned (EPA 840-F-97-001) - highlights top 10 lessons learned by watershed practitioners implementing the watershed approach.
- Monitoring Consortiums: A Cost-Effective Means to Enhancing Watershed Data Collection and Analysis (EPA841-R-97-005) - contains case studies on effective ways to share costs and data.
- Land Cover Digital Data Directory for the US (EPA841-B-97-005) - helps watershed managers find geographic information system data on land use/land cover.
- Watershed Approach Framework (EPA840-S-96-001) - explains EPA's vision for watershed approaches.
- Watershed Protection: A Project Focus (EPA841-R-95-003) - provides a blueprint for designing and implementing watershed projects.
- Watershed Protection: A Statewide Approach (EPA841-R-95-004) - provides suggestions for reorienting statewide water programs to a watershed approach.
- Designing an Information Management System for Watersheds (EPA841-R-97-005) - reviews fundamentals of identifying information management needs, integrating different databases, evaluating hardware/software options, and developing implementation plans.
- Information Management and Communications Support for the Watershed Approach in the Pacific Northwest (EPA841-R-095-004) - presents interviews with leaders and key participants in statewide watershed management in Washington. The document describes how a watershed information clearinghouse can work to assist planning, information management, and communications for watershed groups.

All of these publications are available from the National Center for Environmental Publications and Information at (800) 490-9198 or (513) 489-8190; (513) 489-8695 (fax).

Two additional publications will soon become available: Catalog of Federal Funding Sources for Watershed Protection (EPA841-B-97-008) and Statewide Watershed Approach Facilitation (EPA841-R-97-011).

1998 Course Schedule

EPA is now planning the schedule for the 1998 Watershed Academy courses and will be sending out information in the near future. Please check out the Watershed Academy website at <http://www.epa.gov/OWOW/watershed/wacademy.htm> for course schedules and other information.

If you have questions or comments, call

Joan Warren, Watershed Team Leader, at (202) 260-7796,
Doug Norton at (202) 260-7017, or
Anne Weinberg at (202) 260-7107.

USDA Announces National Conservation Buffer Initiative

The 1996 Farm Bill includes a provision to help landowners establish conservation buffers, which can include riparian areas along rivers, streams, and wetlands. The USDA is committed to helping farmers and other landowners create 2 million miles of conservation buffers by the year 2002. Secretary of Agriculture Dan Glickman said, "[T]his initiative will make a historic contribution to the health of our farms, rural communities, our waterways, and all who rely on them. Agricultural producers and other landowners who install buffers can improve soil, air, and water quality; enhance wildlife habitat; restore biodiversity; and create scenic landscapes."

The National Conservation Buffer Initiative is a multiyear effort led by the Natural Resources Conservation Service (NRCS) in cooperation with other USDA agencies-including the Farm Service Agency, Cooperative Extension Service, and U.S. Forest Service-state conservation agencies, conservation districts, agribusinesses, and agricultural and environmental organizations. For more information, contact your NRCS State Conservationist or call the NRCS at (202) 720-7173.

ATTENTION READERS

Do you work at the state or tribal level, in industry, or at the grassroots level? Then we want to hear from you! You can share your story with over 5,000 watershed experts and other interested parties by submitting an article to Watershed Events. The deadline for the winter issue is December 15, 1997, so get the lead out and write a short article on your watershed program or project, an innovative approach, a success story, or another watershed-related topic.

News From the Field

Watershed-Based Wetland Assessment Method Adopted for the New Jersey Pinelands

Extending westward from the "Jersey Shore," the unique New Jersey Pinelands cover over a million acres in southern New Jersey. Wetlands compose nearly one-third of this diverse and widely recognized region, which has been designated a "national reserve" and an "international biosphere reserve."

The Need for a Watershed-Based Wetland Assessment Method

The New Jersey Pinelands Commission, the state agency primarily responsible for land-use planning and regulation in the New Jersey Pinelands, has established the goal of sustaining the ecological integrity of these wetlands. The establishment of buffer areas between uplands development and wetlands is among the various techniques used by the Commission to achieve this goal. The Commission currently uses a project-specific method to establish buffer width requirements. The method, referred to as the Roman and Good model, considers both wetland quality and development impacts for this purpose. The Commission saw the need for an improved method that would more comprehensively address the overall value of the wetland systems rather than focus on project-specific conditions. The Commission applied for and received an EPA Wetlands Program Development Grant to develop such a watershed-based wetland assessment method. The method was developed by Robert A. Zampella (Pinelands Commission) and Richard G. Lathrop (Rutgers University).

How the Watershed-Based Method Functions

Zampella and Lathrop use a geographic information system-based watershed-level landscape approach to address wetland systems along gradients of ecological integrity and potential impacts. Landscape indices were developed along with a drainage basin ranking system. The indices, grouped into two categories, are:

1. Watershed integrity: developed and agricultural land cover (grouped together because both can affect the ecological integrity of wetlands by fragmenting the landscape, altering upland habitats, and degrading ground and

surface waters), soils with high potential for ground water contamination, surface water quality, major water supply withdrawals, and biological diversity.

2. Potential impacts: future land use patterns, upland soils (the potential for development impacts to wetlands increases with the percentage of poorly drained upland soils adjacent to wetlands), and watershed and wetland dimensions. (Water quality and hydrologic changes of a similar magnitude generally have a greater impact on wetlands in small basins than in large basins. Due to higher surface and ground water flows in large basins, the dilution of contaminants is greater in large basins and impacts tend to be lower.)

Zampella and Lathrop use a modified weighted factor procedure to calculate scores for each of the landscape indices. A rating schedule assigns a scale of 1 (low integrity and low impacts) to 10 (high integrity and high impacts). A weight indicating the relative importance of each index is expressed as a percentage. Zampella and Lathrop calculate the index score by multiplying the rating by the weight. The rankings schedules represent rankings of measured data for each index.

Demonstration Projects

Zampella and Lathrop applied the watershed-based method to a portion of the Pinelands located near the Jersey Shore where development pressures are high. Six demonstration watersheds were selected for the study. These watersheds were chosen for the following reasons: (1) they originate within the Pinelands area and the headwaters fall within the jurisdiction of the Commission; (2) they support representative Pinelands wetland communities and ecological attributes; and (3) they display a gradient of existing development intensity (land cover) and permitted land uses in the Pinelands management areas.

On completion of the demonstration projects, the results of the watershed integrity and potential impact evaluations were as follows: the four watersheds with lower development had higher watershed integrity scores and lower potential impact scores, whereas the two watersheds with the greater amount of growth and development had lower watershed integrity and higher potential impact scores.

Improvement in the Sustainability of Watersheds

The watershed-based method is an improvement over the project-specific Roman and Good method because it employs a cumulative methodology to assess the existing ecological integrity of wetland systems and potential impacts associated with future land use patterns. This cumulative assessment addresses the overall value of affected wetland systems and the potential impact of existing and future projects on these systems collectively. The watershed-based approach provides a method for conducting assessments of all watersheds and associated wetlands for policy decisions concerning site-specific wetland buffer widths. The application of this method in determining wetland buffer widths should improve the prospects for long-term sustainability of watershed integrity.

For more information, contact:

Robert A. Zampella, Chief Scientist, the Pinelands Commission (609) 894-9342;

email: zampella@njpines.state.nj.us

or John Cantilli, EPA Region 2, (212) 637-3810.

New York and New Jersey Governors Pledge Cleanup Of New York/New Jersey Harbor Estuary

In a ceremony held September 11 on the banks of the Hudson River in Battery Park City, the EPA Region 2 Administrator Jeanne M. Fox, New York Governor George E. Pataki, and New Jersey Governor Christine Todd Whitman pledged to carry out an ambitious bistate action plan to restore and protect the New York/New Jersey Harbor Estuary and the ocean waters of the New York Bight.

The plan, called the Comprehensive Conservation and Management Plan (CCMP), includes long-term strategies and immediate actions designed to restore and preserve habitat and living resources and to control toxic contaminants, pathogens, nutrient and organic enrichment, rainfall-induced discharges of pollutants, and floatable debris. It will be updated shortly to address the management of dredged material.

"The goal of the plan is to establish a healthy and productive ecosystem with full beneficial uses," said Regional Administrator Fox.

"The CCMP will be implemented-in fact, portions are already being implemented-in the largest port on the east coast and the most densely populated region in the country. So this is quite a challenge. However, I am confident that with the commitment from the states, local governments, and others, we will achieve our objectives for a vital environment and a vital economy."

"New York Harbor is a remarkable asset," said Governor Pataki. "It provides fish and wildlife habitats, it sustains an important commercial fishery, it carries cargo and passenger shipping, and it provides exceptional outdoor recreational opportunities for millions of people. The harbor is threatened, however, and we must move aggressively to protect it," the Governor said. "This plan is an intelligent blueprint that will guide our collective efforts to ensure the harbor is preserved for the enjoyment and benefit of generations to come."

"The action we are taking today may be the most important environmental legacy of this generation of New Jerseyans and New Yorkers," said Governor Whitman.

"Our estuary and ocean waters will be healthy because New Jersey, New York, and the federal government are going to work together to build on the successes we have already achieved individually."



Charles Warren, Representative of the Citizen's Advisory Committee and Science and Technical Advisory Committee of the Harbor Estuary Program Policy Committee stated that "It has taken a tremendous effort over an 8-year period to complete the plan for the harbor, and the citizens and scientists who participated are proud of their role Now it is essential that all parties to the plan, particularly the governmental agencies, vigorously carry out their commitments and continue to involve the citizens and scientists as they go forward. The harbor estuary is too valuable a resource to lose."

The plan includes numerous actions to address the environmental problems of the harbor and bight, including those to:

- Identify significant habitats and develop targeted plans to protect them. Targeted areas would include the watersheds of the Arthur Kill in New York and New Jersey and Jamaica Bay, New York.
- Track down and clean up discharges of toxic contaminants, such as discharges of polychlorinated biphenyls (PCBs) from municipal sewage treatment plants.
- Control pollutant discharges from combined sewer overflows (CSOs); for example, by implementing management practices consistent with EPA's National CSO Control Policy.
- Control nutrient loadings as necessary to alleviate low dissolved oxygen conditions; for example, using low-cost nitrogen removal methods at municipal sewage treatment plants.
- Develop nonpoint source management programs including control of sediment inputs in areas like the Whippany River Basin, New Jersey.

A key goal of the CCMP is to stop toxic chemicals from getting into the NY/NJ Harbor Estuary. These chemicals contaminate fish and shellfish and cause restrictions on their consumption. Chemicals also contaminate the sediments, which need to be dredged from the harbor to accommodate shipping needs. Because the sediments are contaminated, options to dispose of them are limited.

The NY/NJ Harbor Estuary encompasses the waters of New York Harbor and the tidally influenced portions of all rivers and streams that empty into it. Estuaries are among the most productive of all ecosystems, with 80 percent of all fish and shellfish using them for primary habitats, spawning, or nursing grounds. The New York Bight is the ocean waters that extend approximately 100 miles offshore from the Sandy Hook-Rockaway Point transect to the continental slope. The bight includes 240 miles of beaches extending from Cape May, New Jersey to Montauk Point, New York. Because the bight and harbor are inextricably linked, the CCMP covers both.

[This article was first posted on Garden State Environet's home page at <http://www.gsenet.org>.

For more information, contact:

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Amy Collings, NJ, (609) 984-1795.]

EVENTS

October

18-22 The Water Environment Federation's 70th Annual Conference and Exposition, Chicago, IL. Over 15,000 people and 700 exhibiting companies will participate in this conference, which will focus on global water quality issues.

19-23 Annual Conference and Symposium on Conjunctive Use of Water Resources: Aquifer Storage and Recovery, Long Beach, CA. Sponsored by the American Water Resources Association (AWRA). Contact AWRA, 950 Herndon Pkwy., Ste. 300, Herndon, VA 20170-5531; PH: (703) 904-1225; FAX: : (703) 904-1228; e-mail: awrahq@aol.com; WWW home page: <http://www.awra.org/~awra> [Link no longer available, October 2003].

19-24 Application of GIS, Remote Sensing, Geostatistics and Solute Transport Modeling to the Assessment of Nonpoint Source Pollutants in the Vadose Zone, Riverside, CA. Contact Ellyn Grossman, American Geophysical Union, PH: (202) 462-6910, ext. 242; FAX: (202) 328-0566; e-mail: Egrossman@Kosmos.agu.org.

26-31 Watersheds '97, Anchorage, AK. Includes a watershed fair, a 2- or 3-day conference on watershed initiatives, grant writing, geographic information systems, and environmental indicators, and a separate Cook Inlet Symposium. Contact Gregory Kellogg, (907) 271-6328; e-mail: kellogg.greg@epamail.epa.gov.

27-31 1997 National Indian Agricultural Symposium, Indian Agriculture: Roots of Our Destiny and Sovereignty, Chandler, AZ. Contact the Intertribal Agricultural Council, 100 North 27th Street, Suite 500, Billings, MT 59101; PH: (406) 259-3525.

28-30 GIS/LIS 1997 Annual Conference and Exposition, Cincinnati Convention Center, Cincinnati, OH.

November

2-5 National Urban and Community Conservation Conference, Columbus, OH. Contact NACD, 9150 West Jewell Avenue, Suite 102, Lakewood, CO 80232-6469, PH: (303) 988-1810.

22-24 Joining Forces: Education and Action for Groundwater, Oak Brook, IL. The Groundwater Foundation has announced that the "Priming the Pump" groundwater education workshop and the annual Groundwater Guardian Designation Conference will be combined this year under the theme "Joining Forces: Education and Action for Groundwater." The conference will be held at the corporate training facility of the McDonald's Corporation in Oak Brook. Contact the Groundwater Foundation, P.O. Box 22558, Lincoln, NE 68542, or call (402) 434-2740.

December

3-6 17th International Symposium of the North American Lake Management Society, Houston, TX. Organized by the North American Lake Management Society. Contact Dr. Robert Doyle, (972) 436-2215; e-mail: loyler@EX1.wes.army.mil or Dr. Alan Groeger, (512) 245-2284; e-mail: AG11@swt.edu.

2-4 Partners for Smart Growth Conference, Baltimore, MD. Sponsored by the U.S. EPA and the Urban Land Institute. Smart Growth seeks to achieve a balance among economic growth, community livability, and environmental protection. Contact Michael Pawlukiewicz, (202) 624-7028, e-mail: michaelp@ULI.org.

NEXT YEAR...

May

3-6 Watershed '98 - Watershed Management: Moving from Theory to Implementation, Denver, CO. The conference will present the latest on watershed planning, protection, restoration, and education. Contact Water Environment Federation, (703) 684-2400, for more information; e-mail: confinfo@wef.org.

17-22 22nd Annual Conference of the Association of State Floodplain Managers, Milwaukee, WI. The theme of the conference will be flood hazard mitigation and will include a variety of workshops and plenary sessions on such issues as land-use planning in floodplains, watershed management, stormwater management, multiobjective management (MOM) of river corridors water quality, and river restoration. Contact Diane Watson, 608-274-0123; e-mail: asfpm@execpc.com.

NEW IN PRINT

National Review of Corps Environmental Projects (IWR Report 96-R-27) This Corps report compiles and compares various management measures, engineering features, objectives, resource problems, and detailed costs for a representative sample of Corps environmental projects. To request a copy, fax Arlene Nurthen (703) 428-8435 or download from the IWR website: <http://www.wrc-ndc.usace.army.mil/iwr/index.htm>.

For more information, contact Joy Muncy, (703) 428-6009.

Planning Aquatic Ecosystem Restoration Monitoring Programs (IWR Report 96-R-23) This Corps report provides a unified approach to planning, implementing, and interpreting monitoring programs for restoration projects. To request a copy, fax Arlene Nurthen (703) 428-8435 or download from the IWR website: <http://www.wrc-ndc.usace.army.mil/iwr/index.htm>.

For more information, contact Joy Muncy, (703) 428-6009.

Incorporating Risk & Uncertainty into Environmental Evaluation: An Annotated Bibliography (IWR Report 96-R-9). This Corps report introduces people involved in the planning of environmental/ecosystem restoration projects to some of the relevant literature for assessment of risk and uncertainty issues in the evaluation of environmental investments. To request a copy, fax Arlene Nurthen (703) 428-8435 or download from the IWR website: <http://www.wrc-ndc.usace.army.mil/iwr/index.htm>.

For more information, contact Leigh Skaggs, (703) 428-9091.

Planning & Evaluating Restoration of Aquatic Habitat from an Ecological Perspective (IWR Report 96-EL-4). This Corps report presents key ecological information for six major aquatic ecosystem types and profiles the spatial characteristics, species interactions, and dominant processes of each major type. To request a copy, contact the Waterways Experiment Station website: <http://www.wes.army.mil>, or phone (800) 522-6937.

Water Works: A Guidebook for Community Action Groups. Produced by the Tennessee Valley Authority, this publication provides step-by-step instructions for working in partnership with others to improve and protect water resources. The guidebook profiles successful experiences of various community groups and individuals in the Valley who have dedicated themselves to the cause of clean water. For a free copy, contact TVA, (423) 632-3034.

Banks & Buffers-A Guide to Selecting Native Plants for Streambanks and Shorelines. This Tennessee Valley Authority guide describes native, riparian plants and helps property owners and others identify plants best suited for particular sites. It includes a CD-ROM database with color photographs of 117 species of native plants and information about their characteristics and environmental tolerances.

For a copy, call TVA at 423-751-7338. The cost is \$25, plus \$5 for shipping and handling.

Managing Resources for a Sustainable Future: The Edisto River Basin Project Report. The Edisto Project was a national research and demonstration project in watershed management with two phases-(1) an assessment of the basin's natural, economic, cultural, and recreational resources and (2) the development of a comprehensive basinwide management plan. Copies of this excellent report are available from South Carolina Department of Natural Resources, 1201 Main Street, Suite 1100, Columbia, SC 29201, or by calling

(803) 737-0800.

Stream Corridor Restoration: Principles, Processes, and Practices

In an unprecedented cooperative effort, several federal agencies are developing a document of stream corridor restoration technology to serve as a common technical reference.

The publication will contain restoration technology that is applicable to streams in both urban and rural settings. It is intended primarily for interdisciplinary teams responsible for planning, designing, and implementing stream corridor restoration.

The publication will be available in the spring of 1998. For more information, contact the USDA Natural Resources Conservation Service via e-mail at the following address: stream.corridor@usda.gov or visit their web site at: www.usda.gov/stream_restoration.

What Is This Thing Called MAUT?

One of the major challenges for the watershed approach is the decision process. Stakeholders generally have strong convictions, and their beliefs generally originate from what they perceive. Because the chance of coming to a decision that achieves optimal results depends, not only on the equality of the decision, but also on the commitment to action that decision, it is important that stakeholders have the same opportunity to express their preferences, weigh the objectives, and develop alternatives. MAUT is one decision tool that can help stakeholders reach credible and acceptable decisions.

MAUT stands for Multi-Attribute Utility Theory. It recognizes that each stakeholder values a watershed from a different perspective. While some expectations and preferences are shared, others are different, or even conflicting, among stakeholders. By developing a common understanding and fair consideration of preferences, MAUT finds ways to resolve conflicts and satisfy the interests of both the majority and the minority.

The benefits of MAUT are evident in Washington's Salmon Restoration and Recovery Project in Willapa Bay. Still underway, the project will culminate in a stakeholder-developed salmon strategy designed to achieve the most important objectives identified by the group. Stakeholder groups are already changing their priorities to make the strategy work. For example, commercial fishermen in Willapa Bay no longer consider catching more fish as their primary objective-now they support maintaining sustainable fish populations.

For more information, contact Dr. Rachel Nugen, (206) 535-7684; e-mail: nugentra@plu.edu.

What's New on the Web?

U.S. NonProfit Gateway (www.nonprofit.gov). This "one-stop shopping center" was unveiled by Vice President Gore in September to help nonprofit groups tap into information on opportunities to partner with federal agencies. It provides a network of links to more than 300,000 government web pages with information on grants, budgets, volunteer opportunities, and agency partnerships. The web site was developed by an interagency task force composed of 15 federal agencies.

NRCS's State of the Land Web Site (www.nhq.nrcs.usda.gov/land/home.html). This web site includes online access to NRCS maps and other analysis products and information on how NRCS, its partners, and American agriculture are dealing with environmental issues. The site is intended to be a forum for analyses done at all levels in the agency.

Index of Watershed Indicators

The Index of Watershed Indicators (IWI or Index), formerly "NWAP," is EPA's first national picture of watershed health. The Index organizes and presents aquatic resource information on a watershed basis. It combines 15 indicators of aquatic resource health to characterize the condition and vulnerability of 2,111 watersheds in the continental United States.

The Index will be useful to people across the nation—individuals; watershed councils and partnerships; local, state, tribal, and federal managers—anyone who wants to get a sense of the health of a particular watershed and how it compares to other watersheds.

What does the Index of Watershed Indicators Show?

Progress and Challenge: Many organizations and people have been working together to maintain and improve water quality. They have been successful in improving water quality, but the IWI illustrates that substantial challenges remain.

Watershed Condition: About 16 percent of the watersheds nationally have relatively good water quality, and about 36 percent have moderate problems. About 21 percent nationally have more serious problems, and there is not enough information to characterize another 27 percent using the IWI method.

Watershed Vulnerability: While most of America's watersheds are vulnerable to degradation, 1 in every 14 watersheds nationally is highly vulnerable.

Specific Observations:

- **Monitoring:** The IWI for the first time combines diverse data sources to produce pictures of watershed health at different scales—national, regional, state and watershed.
- The major causes of watershed vulnerability are population increases, agriculture, and hydrologic modifications. The loss of wetlands and the presence of fish consumption advisories indicate problems in many watersheds.
- Pollution from large dischargers such as factories and sewage treatment plants is widely controlled and when viewed nationally, does not appear to cause widespread harm to rivers, lakes, and streams. Locally, however, this pollution may remain a problem.
- Polluted runoff from agriculture and urban areas remains a major source in about a quarter of the watersheds, and ranks high on the list in another half.
- More information is needed for about 25 percent of the watersheds nationally.

For more information on this Index and on watershed protection, contact Index of Watershed Indicators, Assessment and Watershed Protection Division (4503F), U.S. EPA, Washington, DC 20460. Or visit EPA's web site at <http://www.epa.gov/iwi/>.

Watershed Events

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Watershed Events provides updated and timely information to professionals and others interested in the development and implementation of the watershed approach and in achieving watershed goals. The watershed approach focuses on mitigating the primary threats to ecosystem and human health and involving stakeholders to take action in an integrated, holistic manner. Please direct any questions or comments to:

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