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STREAMLINES

A Newsletter for North Carolina Water Supply Watershed Administrators

The North Carolina Wetlands Restoration Program: Watershed Planning and Restoration

Established by the General Assembly in 1996, the North Carolina Wetlands Restoration Program (NCWRP) is an innovative, non-regulatory program intended to help restore wetlands, streams and riparian buffer areas throughout the state. It is housed in the Division of Water Quality, Department of Environment and Natural Resources.

The goals of NCWRP are:

- To protect and improve water quality through restoration of wetland, stream and riparian area functions and values lost through historic, current and future impacts.
- To achieve a net increase in wetland acreage, functions and values in all of North Carolina's major river basins.
- To promote a comprehensive approach for the protection of natural resources.
- To provide a consistent approach to address compensatory mitigation requirements associated with wetland, stream and buffer regulations.
- To increase the ecological effectiveness of compensatory mitigation projects.

INSIDE THIS ISSUE:

There are many agencies and programs implementing and funding stream, wetland and buffer restoration projects across the state. However, NCWRP is the only program that uses a systematic approach to set restoration priorities based on restoration need and opportunity. Detailed planning allows NCWRP to focus its resources on projects that have the greatest likelihood for improving water quality, floodwater retention, habitat and recreational opportunities. In addition, by accepting compensatory mitigation payments, NCWRP is able to implement large-scale projects that might otherwise go unfunded due to limited resources.

NCWRP & Planning

NCWRP believes that the implementation of the best stream, wetland and riparian buffer restoration projects begins with planning. In line with this belief, the program includes a strong planning component that is comprised of two major parts. The first is the development of Watershed Restoration Plans for each of North Carolina's 17 major river basins. These plans rely heavily on information contained in the Division of Water Quality's basinwide water quality plans and are generated on the same schedule. The second major component of NCWRP's planning efforts is the local watershed planning initiative. Local watershed plans focus resources in specific 14-digit hydrologic units* in order to address water quality and quantity issues. The whole planning process involves conducting a detailed assessment of the condition of the watershed, involving the local community in identifying solutions to water quality and quantity problems, and working to get agreed upon solutions implemented.

(See NCWRP on page 2)

Due to budget constraints, Streamlines may not be mailed out in the future. Please look for it at: http://h2o.enr.state.nc.us/wswp/.

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Watershed Restoration Plans

The Watershed Restoration Plans serve as a dynamic tool for identifying potential restoration sites, analyzing resource information, and prioritizing wetland restoration efforts. The watershed approach embodied in these plans involves a thorough assessment of conditions within a river basin to prioritize component watersheds. Those with the highest need and opportunity for restoration are identified as Targeted Local Watersheds. NCWRP locates stream, wetland and riparian buffer restoration projects in Targeted Local Watersheds to provide the greatest benefit to the river basin as a whole.

Local Watershed Plans

Although communities across the state face many of the same issues when dealing with water quality problems, each community has its unique characteristics, concerns and priorities. Therefore, it is important that communities take part in assessing the conditions of the resources in their watershed and developing a customized strategy to address their own goals and objectives. Local watershed plans work to identify factors contributing to water quality degradation within a watershed and provide strategies to address nonpoint sources of pollution. One component is the identification of sites for wetland, stream and riparian buffer restoration. However, this is just one piece of the water quality puzzle.

In most watersheds, wetland, stream and riparian buffer restoration alone will not be sufficient to improve water quality. Other nonpoint sources of pollution, such as stormwater runoff and failing septic systems, need to be located and addressed through other types of water quality improvement projects.

(See NCWRP on page 3)

Watershed Assessment & Restoration Project

The North Carolina Division of Water Quality (DWQ) has initiated a new project to further our knowledge of impaired streams and facilitate their restoration. This effort, called the Watershed Assessment and Restoration Project (WARP), is focusing on 11 watersheds across the state during the period 2000 though 2002. Each of these watersheds contains streams considered impaired because they are unable to support healthy aquatic communities. The reasons for the impairment are unknown, which makes it difficult for water quality improvement activities to proceed effectively. All watersheds are located within high priority hydrologic units, as defined by the Unified Watershed Assessment process, a cooperative effort between DWQ and the U.S. Department of Agriculture.

The project's goal is to provide the foundation for future water quality restoration activities in the 11 watersheds by: 1) identifying the most likely causes of biological impairment (such as degraded habitat or specific pollutants); 2) identifying the major watershed activities and sources of pollution contributing to those causes (such as stormwater runoff from particular urban or rural areas, stream bank erosion or hydrologic modification); and 3) outlining a watershed strategy that recommends restoration activities and best management practices to address these problems and improve the biological condition of the impaired streams.

The project is funded by the Clean Water Management Trust Fund, which allocates grants to local governments, state agencies and conservation non-profits to support voluntary efforts to address water quality problems. The trust fund is seeking DWQ's recommendations regarding the types of activities that should be funded in these watersheds to improve water quality.

Project staff are using biological sampling, habitat evaluation, chemical monitoring and watershed analysis to identify the most likely reasons for biological impairment and to identify the most important sources of pollution contributing to this condition. The project represents a focused effort to address aquatic life use support issues in impaired streams. It is not intended to address the full spectrum of water quality issues.

Although this project and the NCWRP's local watershed planning efforts both have the ultimate goal of watershed restoration, the two initiatives have distinct emphases. WARP, as noted above, emphasizes understanding why impaired streams are not meeting expectations for aquatic life uses. NCWRP's efforts encompass a wider range of objectives, including protection of high quality streams, improvement of streams that are degraded but not impaired, water supply issues, and human health concerns related to bacterial contamination, among others. NCWRP plans will thus be broader in scope but will not be able to focus as intensively on identifying causes of biological impairment. Additionally, while WARP suggests restoration activities to address identified problems, the primary emphasis is on technical assessment. NCWRP local watershed plans will involve a broader range of activities including extensive stakeholder involvement and planning for project implementation.

Thank you to Jim Blose of the Watershed Assessment and Restoration Project for his work in generating this summary. For more information on this project, please contact Mr. Blose at 919-716-1924.

Due to budget constraints, Streamlines may not be mailed out in the future.

NCWRP (Continued from page 2)

Accordingly, the solutions identified in local watershed plans include not only wetland, stream and riparian buffer restoration projects, but a comprehensive package of initiatives needed to successfully improve and protect water quality in the long term.

Benefits of the planning process include:

- Promoting locally-driven, interactive restoration planning that can address the specific watershed concerns of local communities.
- Enabling local knowledge to be combined with technical support and resources to identify specific sources of water quality degradation and develop appropriate solutions.
- Helping local communities to guide implementation of strategies developed through the planning process cooperatively with NCWRP.

Landowner Participation

Within Targeted Local Watersheds and as a part of the local watershed planning efforts, NCWRP is actively seeking interested landowners with properties that include:

1. Channelized streams bordered by prior converted agricultural land;
2. Streamside areas in the headwaters of a Targeted Local Watershed which have been altered (clear cut, farmed, channelized, ditched); or
3. Any streams or areas adjacent to streams that are degraded in some way (bank erosion, channelized, lack of vegetated buffer, heavy sediment deposition).

To determine participation eligibility, a Site Proposal Form must be completed and sent back to NCWRP. After the form is received, NCWRP staff will evaluate the following criteria:

1. Location of property within NCWRP's targeted watershed.
2. Estimated cost and difficulty of implementing restoration activities.
3. Potential benefits of restoration for water quality improvement, flood prevention, fisheries and wildlife habitat and recreational opportunities.

If these criteria are met, NCWRP staff will contact the landowner to obtain permission and to schedule a field assessment of the property to further determine its eligibility. If not on-site during the field assessment, the landowner will then be contacted about the eligibility determination.

NCWRP conducts its restoration activities on properties enrolled through permanent conservation easement (purchase or donation), fee-simple purchase or land donation. Unless the property is donated, NCWRP is able to offer eligible landowners monetary compensation for properties based on a one-time payment determined by the appraised fair market value. Federal and state tax incentives may be available for donated properties and those enrolled through permanent conservation easement with NCWRP.

Mitigation Efforts

Another purpose of NCWRP is to provide a consistent and streamlined approach to address compensatory mitigation requirements associated with 401 and 404 permits issued by the Division of Water Quality and the U.S. Army Corps of Engineers. NCWRP accepts payments to the Department of Environment and Natural Resources Wetlands Trust Fund according to a fee schedule and performs mitigation on behalf of permit applicants.

The Wetlands Restoration Program is also an option to meet compensatory mitigation requirements associated with riparian buffer impacts in the Neuse, Tar-Pamlico and Catawba river basins. In this case, payment is made to the Riparian Buffer Restoration Fund. By consolidating the mitigation requirements of multiple small projects, NCWRP is able to implement large-scale watershed restoration efforts that address significant water quality problems identified during the planning process.

For more information about NCWRP, please contact: Crystal Braswell at (919) 733-5208, or write to North Carolina Wetlands Restoration Program, Department of Environment and Natural Resources, Division of Water Quality, 1619 Mail Services Center, Raleigh, NC 27699-1619, or visit the website http://h2o.enr.state.nc.us/wrp/index.htm.

Thank you to Bonnie Duncan of the Wetlands Restoration Program for her time and energy in compiling this article.

*14-digit hydrologic units are small watersheds with boundaries defined by a uniform system set by USGS. In North Carolina, their average size is 31.8 square miles. (http://minerals.usgs.gov/sddp/doc/faq/huc250.faq.html#what)

Please continue to look for it on our website: http://h2o.enr.state.nc.us/wswp/.

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Due to budget constraints, Streamlines may not be mailed out in the future. Please continue to look for it at: http://h2o.enr.state.nc.us/wswp/. Streamlines is published quarterly in January, April, July and October.

WHAT'S HAPPENING?

Environmental Management Commission
December 13
Archdale Building, Raleigh
The Water Quality Committee meets the day previous to every EMC meeting.
http://h2o.enr.state.nc.us/admin/emc/

Reclassification Hearing
Hiwassee River in Cherokee County, increased critical area
November 8, 6 p.m., Centura Bank Building, Murphy
Elizabeth Kountis, 919-733-5083 x369

Broad River Basin Water Quality Workshops
October 29, 5:30-8:30 p.m., Lake Lure Municipal Center, Lake Lure
October 30, 9:00 a.m. – noon, Rutherford Co. Extension, Spindale
October 30, 4:30 – 7:30 p.m., Cleveland Community College, Shelby

Other River Basin Meetings
Broad – Public Meetings planned for October 29 and 30
Hiwassee – Public Meeting planned for November
Savannah – Public Meeting planned for November
Watauga – Public Meeting planned for October 23
http://h2o.enr.state.nc.us/basinwide/meetings_by_month.htm

Coastal Water Quality Workshop - Linking Land Use and Water Quality
All are 9 a.m. - 3:30 p.m.
October 31, College of the Albemarle, Elizabeth City
November 7, Riverfront Convention Center., New Bern
November 15, Warwick Center, UNC - Wilmington
http://h2o.enr.state.nc.us/admin/pubinfo/calendar/calendar2001.html

DID YOU KNOW?

The Water Supply Watershed Protection Rules call for local watershed administrators to send the Division of Water Quality, Local Government Assistance Unit a description of all locally-approved minor variances to their Water Supply Watershed Protection Ordinance by January 1 on an annual basis. This description should include a summary of the project and the reason for granting the variance. Please take note of this date. Thank you to the communities that are already sending us these annual descriptions.

The Basinwide Planning Program has developed a document called *A Guide to Water Quality Management in North Carolina* that describes important water quality management issues, problems and programs in North Carolina. The document can be downloaded as a zipped Microsoft Word file (1,400 KB) at http://h2o.enr.state.nc.us/basinwide/water%20quality%20document.htm.

According to the Center for Watershed Protection, there are seven urban stream restoration goals: control the urban hydrologic regime (ex. install upstream structural retrofits); remove urban pollutants; restore instream habitat structure (ex. provide fish cover); stabilize channel morphology (ex. stabilize bank erosion); replace/augment riparian cover (ex. revegetate stream banks); protect critical stream substrates (ex. use erosion and sediment controls); and recolonize stream community (ex. remove fish migration barriers). For more information see: Claytor, Richard. "Assessing the Potential for Urban Watershed Restoration." *Watershed Protection Techniques*. 1(4): 166-172.

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