A NEWSLETTER FOR NORTH CAROLINA WATER SUPPLY WATERSHED ADMINISTRATORS

January 2000
Volume 4, Issue 1

Streamlines

Inside this issue:

Did You Know :

- There are 277 counties and municipalities in North Carolina that have land use jurisdiction in one or more surface water supply watersheds?
- There are over 220 surface water supply watersheds in North Carolina?
- Less than 20% of the State's land area is subject to the Water Supply Protection Rules?

Welcome to the New Millennium!

We are excited about the new year! It seems to be that January is always a time of fresh beginnings and reflections on what can be accomplished in the coming months.

As we enter into the next *century* together, the Division of Water Quality's Local Government Assistance Unit (LGAU) would like to make a special commitment to the local governments and citizens that we serve to provide you with the best service possible.

As one way of doing this, we have decided to revive the *Streamlines* newsletter. This publication is intended for Water Supply Watershed Administrators, their staff and co-workers. But anyone who is interested in receiving a copy can be added to our mailing list!

We hope to be able to use *Streamlines* to keep you up to date with water supply watershed issues, spotlight special topics of interest and talk about the questions we are asked most frequently.

(See New Millennium on page 2)

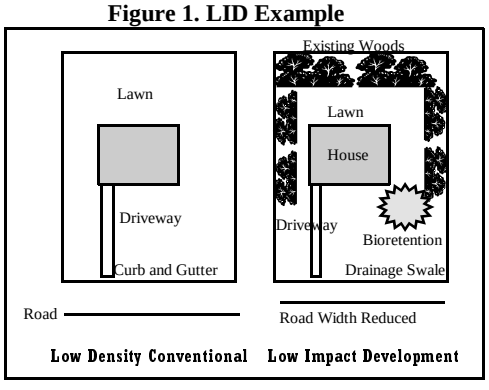
LGAU Staff at Falls Lake Reservoir in Wake County. From the left is Gloria Putnam, Liz Kovasckitz, Steve Zoufaly, Milt Rhodes and Jeff Coutu.

Low Impact Development Design

Low Impact Development (LID) is a comprehensive technology-based approach to managing urban stormwater runoff. With LID, stormwater is managed in small landscape features located on each lot. These features might include on-lot microstorage; functional landscaping; open drainage swales; reduced imperviousness; flatter grades; increased runoff travel time, and depression storage. These controls can be used to reduce the hydrologic impacts of most developments. LID design can also reduce development costs by reducing impervious surfaces (roadways), curb and

(See Low Impact on page 3)

Figure 1. LID Example



New Millennium *(Continued from page 1)*

Some of you may be confused by the Local Government Assistance Unit staff picture on page one. If we haven't worked with each other lately, you may not recognize the names or faces of the staff members.

The LGAU resides within the Planning Branch of DWQ's Water Quality Section. The responsibilities of the Unit include both the Water Supply Watershed Protection Program and the State Environmental Policy Act (SEPA) Program.

Steve Zoufaly is the supervisor of the Local Government Assistance Unit. Many of you may remember Steve from the early days of the Water Supply Protection Program. Steve has worked with DWQ for 17 years as a computer modeler, and more recently as the supervisor of the Standards and Classifications Unit. Outside of work Steve and his wife, Deb, enjoy motorcycling and creating garden sculpture.

Jeff Coutu joined the LGAU in November 1998 and is a Community Development Planner. Jeff has a masters degree from Virginia Polytechnic Institute and State University in Public Affairs. He came to us with 25 years of local government experience, primarily as a planning director. Jeff has a wife, Jessica, and two daughters and resides outside of Clayton (Johnston County).

We're Here to Help if You Need It!

Liz Kovasckitz has been a Community Planner in the LGAU for the past year. She has been with DWQ for six years and has worked with aspects of water supply watershed protection for five of those years. Liz has a masters degree in GeoEnvironmental Studies from Shippensburg University in Pennsylvania. She lives in Lee County with her husband, Don, and two young children.

Milt Rhodes joined the LGAU in July as a Community Planner. Milt has a masters degree in Urban Planning from the State University of New York at Buffalo but originally hails from Winston-Salem. He has worked in Charleston, S.C. for the last 5 years as an environmental planner focussing on watershed issues and Geographic Information Systems (GIS). Milt lives in Raleigh with his wife, Karen, two daughters and two-year-old black Lab.

Gloria Putnam came to the LGAU in November 1998. Gloria is an Environmental Specialist and is responsible for the SEPA Program. Gloria has three years of experience with non-profit organizations and has been working in state government for two years. Gloria has a masters degree in Environmental Policy and Management from the University of North Carolina at Chapel Hill. She resides in Raleigh.

At this time, we plan to publish Streamlines on a quarterly basis. This is *your* newsletter. Please let us know if there are topics you would especially like to see covered in upcoming issues. We look forward to working with you!

Happy New Year!!!

For model ordinances designed to protect local resources check out http://www.epa.gov/owow/nps/ordinance/ and http://www.cwp.org/

Local Government Assistance Unit Contacts

Any of the LGAU staff are happy to take your call, but there may be a way to shorten the amount of time required to answer your question by using these simple guidelines. Dial (919) 733-5083 to reach the Division of Water Quality. Then check the contact list below and dial the appropriate extension. If you chose to contact us by e-mail instead, please include a telephone number where we can reach you.

State Environmental Policy Act Program

Gloria Putnam, extension 567, e-mail: gloria.putnam@ncmail.net

Water Supply Watershed Protection Program

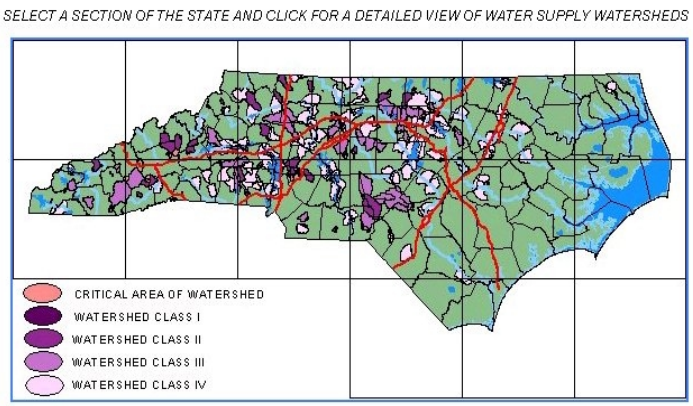
Jeff Coutu, extension 555, e-mail: jeff.coutu@ncmail.net, ***Counties A through G and municipalities N through Z, plus Clayton***

Liz Kovasckitz, extension 572, e-mail: liz.kovasckitz@ncmail.net, ***Counties K through Z and municipalities A through G plus High Point and Sanford***

Milt Rhodes, extension 366, e-mail: milt.rhodes@ncmail.net, ***Counties H through J and municipalities H through M***

Steve Zoufaly, extension 566, e-mail: steve.zoufaly@ncmail.net

VISIT US ON THE WEB



The Local Government Assistant Unit has made some changes to its website. On the main pages you can still find statistical, geographic, and policy oriented information regarding water supply watersheds as well as the model ordinance and interesting links to other programs. From the link marked "Mapping" on the home page you will find the new Water Supply Watershed Program maps and a new interactive watershed mapping system. Using ARCVIEW® Geographic information systems, planners in the LGAU have developed an internet compatible interactive mapping system to help get more information into the hands of watershed administrators and the citizens they serve.

Go to: http://h2o.enr.state.nc.us/wswp

The maps are divided into two parts. The first (accessed at http://h2o.enr.state.nc.us/wswp/mapping.htm) is primarily visual, providing a quick description of water supply watershed classes. To access a WS-II watershed, for example, click on the WS-II watershed class button in the legend to highlight the WS-II watersheds on the map. A description of water supply watershed rules and the names and acreage

(See Website on page 4)

Mow the grass high & let it lie – leaving clippings on the lawn can eliminate the need for fertilizer, helping to keep the lawn & streams healthy!

Low Impact *(Continued from page 1)* gutters and requiring less after the fact stormwater management.

Conventional Stormwater Management Site Design Versus LID Site Design

Typical site development methods tend to concentrate on removing stormwater runoff as quickly and efficiently as possible from the site. Roadways, roofs, gutters, curbs, pipes and parking are all usually designed to remove runoff in a rapid fashion. Conventional site design can result in a development devoid of natural hydrologic functions, which could adversely affect the ecosystem.

The principal of LID, however, is to ensure maximum protection of receiving waters by maintaining the watershed's hydrologic scheme. This is done by designing hydrologic functions into the site design, such as bioretention areas, in order to duplicate the predevelopment hydrology of the site. This can result in a significant positive effect on stream stability, habitat structure, base flows and water quality.

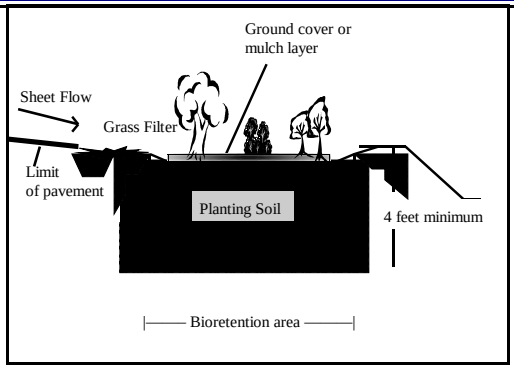


Figure 2. Example of a Bioretention Area

Fundamental Low Impact Development Site Planning Concepts:

1. Use Hydrology as the Integrating Framework: In LID technology, the traditional approach to site drainage is reversed to mimic the predevelopment hydrology. Instead of rapidly and efficiently draining the site, LID relies on various planning tools and control practices to keep the natural hydrologic functions of the site.

2. Think Micromanagement: Micromanagement techniques implemented on small sub catchments, or on residential lots, as well as common areas, allow for a distributed control of stormwater throughout the entire site.

3. Control Stormwater at the Source: Typically, the most economical and simplistic stormwater management strategies are achieved by controlling runoff at the source.

4. Use Simple, Nonstructural Methods: Simple systems use lower technology materials and rely on natural products that integrate into the landscape.

5. Create a Multifunctional Landscape and Infrastructure: The bioretention cell in Figure 2 is an example of a multifunctional design. It provides habitat, runoff detention, pollutant removal, water storage and other functions.

Information for this article was obtained from Low-Impact Development Design Strategies prepared by Prince George's Co., MD, DER, and Sponsored by the EPA Office of Water.

A Newsletter for North Carolina Water Supply Watershed Administrators

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Address Correction Requested

Check us out at: http://h2o.enr.state.nc.us/wswp/index.html

Upcoming Events

Environmental Management Commission: The Environmental Management Commission will meet on February 10, March 9, April 13 and May 11. No meeting is scheduled for January. The EMC's Water Quality Committee meets the day before the full Commission meeting.

American Planning Association: The APA National Planning Conference will be held from April 15–19 in New York City *(http://www.planning.org/conferen/index.html)*.

N.C. General Assembly: The General Assembly convenes at noon on May 8, 2000.

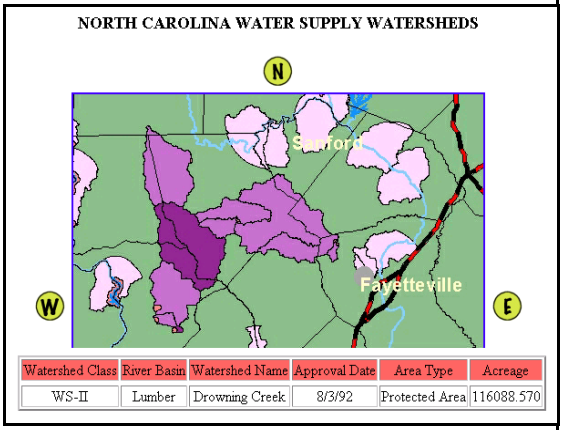
N.C. Chapter of the American Planning Association: The NCAPA Conference will be held May 18-19 at the Raleigh Sheraton. The theme of the conference is Smart Growth *(http://www.nc-apa.org/y2k_conference.htm).*

Minor Variance Submission Reminder: Local governments are required to send in a description of projects receiving a variance from the water supply watershed Protection Rules and the reason for granting the variance to the EMC on an annual basis by January 1st each year. Submissions can be sent care of the LGAU to the return address above .

Website *(Continued from page 3)*

of water supply watersheds are also provided.

An interactive mapping system, which is accessed from the first map page, comprises the second part. This system allows the user to point and click their way to detailed watershed information. Information includes buffer widths, impervious surface limits and stormwater management requirements. Information including the local watershed administrator's name, address and phone number is also available. We hope that providing access to these mapping products will help local citizens and watershed planners gain a more thorough understanding of their role in watershed planning.



Watershed Class	River Basin	Watershed Name	Approval Date	Area Type	Acreage
WS-II	Lumber	Drowning Creek	8/3/92	Protected Area	116088.570

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