

Turning the Tide

on runoff pollution

Fall 2007

SC DHEC's Bureau of Water

Task Force Aims to Protect Gills Creek

By Amy Overstreet Maxwell, USDA-Natural Resources Conservation Service

The Gills Creek Watershed has been getting lots of attention lately, and a group of county, state and federal agencies, as well as local residents and concerned conservationists, are putting their heads together to come up with a plan to protect the mostly urban watershed. Located in Richland County, the area of concern includes parts of Columbia, Forest Acres, Fort Jackson, and Arcadia Lakes. The watershed's headwaters start on Fort Jackson and flow southeast into the Congaree River, containing nearly 90 acres of stream miles and 943 acres of lake waters.

With 56 percent urban land use, the watershed is feeling the

effects of development, including nonpoint source pollution, sedimentation, and flooding. More development means more hard surfaces.

As a result, water that was once absorbed and filtered by soil and plants now moves across pavement, picking up nitrogen, phosphorous, oil, heavy metals and bacteria, which

eventually end up in the streams and lakes throughout the Gills Creek Watershed. Runoff from construction sites carries sediment into streams causing numerous problems downstream, particularly in the small lakes.

However, the outlook for the watershed may be brightening as natural resource agencies and citizens focus new attention on the area. The Gills Creek Watershed Task Force (GCWTF) was developed with the intent of developing a vision for the watershed, as well as defining goals and action steps necessary to improve water quality. GCWTF Interim Chairman Elliott Powell, who lives on one of the affected water bodies within Gills Creek, said, "We are a group of concerned citizens and natural resource

professionals who have joined together to make a difference in the health of this watershed." The task force was formed to act as an umbrella organization to identify, coordinate, and provide leadership for the efforts of public and private groups with a stake in the Gills Creek Watershed.

Presently, the group is working to

implement an education and outreach

campaign, and is conducting an assessment which will help define both point source and nonpoint sources of pollution. "Much of the watershed pollution is caused by stormwater runoff, a problem closely tied to urban sprawl and overdevelopment throughout the watershed," explained Powell.

Potential projects include removal of sediment deposits in lakes, stream restoration, installation of stream buffers, improvement of wildlife habitat, and also informing residents on how they can reduce negative impacts on water quality. The GCWTF is also creating a website to publicize their efforts and encourage local residents to get involved.

For more information, contact Rebecca Haynes at 803-898-4211 or haynesr1@dhec.sc.gov or Roger Hall at 803-898-4142 or hallrp@dhec.sc.gov.



Runoff carrying sediment, oil, and bacteria washes into Lake Katherine

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Scape Ore Swamp Promotes Stewardship with Clever Outreach Campaign

By Amy Overstreet Maxwell, USDA-Natural Resources Conservation Service

If you've lived in Lee County, SC for a while, then chances are you have heard the legend of the Lizard Man of Scape Ore Swamp. This far-fetched story about a half-man/half-lizard that roamed the Scape Ore Swamp even made it to national news back in the late 80's! SC's Lizard Man is back on the prowl, but this time he is helping to improve and protect water quality!



The Santee Wateree Resource Conservation & Development (RC&D) Council received a 319 Non-point Source Pollution (NPS) Grant from the SC Department of Health and Environmental Control (SCDHEC). The grant funds are helping the Scape Ore Swamp Water Quality Partnership to identify and control high concentrations of fecal coliform bacteria. Because of the high fecal coliform bacteria levels found in the water, the watershed was placed on South Carolina's list of Impaired Waters (also known as the 303(d) list). "This watershed is managed primarily as agricultural or forest lands with the major crop being cotton,"



Compost sheds were built to keep litter covered and dry before application.

explained Santee Wateree RC&D Coordinator Roy Todd. Because animal waste contains fecal coliform, and

because runoff from farming operations often ends up in nearby water sources, the potential for pollution

is high in this watershed. Some of the problems identified included improper fertilizer management due to use of excessive poultry litter, and un-

restricted access to streams and lakes by livestock. "We focused our efforts on educating landowners about best management practices and offered them assistance in installing practices which protect water quality," explained Todd. Some of the practices included fencing, repairing failed septic systems, constructing waste storage facilities, manure testing and composting, nutrient management as well

as stream protection including buffer strips.

Another interesting component of the project was the public outreach campaign. It was determined that failed septic systems on private home sites were another cause

of degraded water quality in the water-

shed. A study indicated that over 90% of residents within the Scape Ore Watershed used septic systems and over 5% of those were failing. "We

had to educate homeowners about the effects that they too can have on water quality in this watershed," said Todd.

The unique outreach campaign was implemented by creating a campaign logo featuring the Lizard Man, and the question, "How Clean is Your Water?" Todd said this simple question makes people realize that the water quality in a watershed is important to everybody—not just farmers or landowners. "We are trying to get people to understand that the water they depend on for survival every-day is impacted by so many different sources, including what goes on right

around their own homes."

This project is a partnership between the Santee-Wateree RC&D, Lee and Kershaw



A new septic system was installed to replace the existing failing system.

Soil and Water Con-

servation Districts, the SC Department of Natural Resources, USDA-Natural Resources Conservation Service, SCDHEC, and the US Environmental Protection Agency.

For more information, contact Roy Todd at (843) 629-8784, ext. 5.

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Shellfish and NPS Pollution

By Carol Copeland, SCDHEC- Watershed Manager for Edisto and Catawba



South Carolina's beautiful and historic coast allows you to play in the waves, collect seashells, and take a leisurely walk while enjoying the sounds of the ocean. Did you know that South Carolina's coast also has successful shellfish harvesting waters?

South Carolina's coast has about 571,000 acres of estuarine and riverine growing area habitat suitable for the cultivation and harvest of shellfish within 25 Shellfish Management Areas. Acreage classified as Approved, Conditionally Approved, Restricted, or Prohibited is designated by the South Carolina Department of Health and Environmental Control (SCDHEC). These classifications are based on the potential use for harvesting shellfish.

South Carolina's shellfishing waters are routinely monitored for fecal coliform bacteria. There are 450 shell-

fish sampling stations in 25 management areas within three management districts along the coast. High levels of bacteria are an indicator of the presence of human disease causing organisms, which can contaminate the shellfish and make them unsafe to eat. Stormwater runoff is the usual pathway for bacteria reaching shellfish waters. Stormwater conveys bacteria from potential sources such as wildlife, failing septic systems, confined domestic animals (cows, horses, poultry), pets, and broken or overflowing sewer lines. Discharges from boat toilets can also introduce fecal coliform bacteria directly into the water.

Several efforts are underway by the SCDHEC to identify and control these sources in an effort to maintain Approved harvesting acreage and potentially open currently Restricted

or Prohibited waters.

What can you do to make sure future shellfish are safe to eat? Reduce your contribution to runoff pollution! Scoop the poop. Don't over fertilize your yard. Make sure your septic system is working properly. Properly dispose of your boat discharge. Acting on these things will help keep South Carolina's waterbodies clean and therefore lead to edible shellfish.

For more information, please contact Carol Copeland at copelaca@dhec.sc.gov or call her at (803) 898-4203.

To learn more about DHEC's shellfish program, please visit our website at: <http://www.scdhec.gov/environment/water/shellfish.htm>.

Getting the Word Out

Raising Awareness of Marine Debris

By Dan Burger, SCDHEC Office of Ocean and Coastal Resource Management

The next time you visit the beach, take a moment to consider that each year over 50 tons of plastic, fishing gear and other litter is collected from our beaches and coastal waterways. Not only does litter look terrible, it also poses a serious and sometimes deadly threat to turtles, birds, and other marine animals when mistakenly ingested as food or when animals become trapped or entangled. Clearly, marine debris is a grave threat to the health and beauty of our coast, but it is preventable.

With grant support from the National Fish and Wildlife Foundation, SCDHEC's Office of Ocean and Coastal Resource Management kicked off a series of projects earlier this spring to educate the public about the many perils of marine debris. Over Memorial Day and the July 4th holiday weekends, SCDHEC-OCRM

aired an entertaining coast-wide public service announcement that used a grouchy fish's perspective to encourage beachgoers and boaters to be responsible for their trash. You can join the over 92,000 radio listeners who heard the message by visiting our website at: <http://www.scdhec.gov/environment/ocrm/>

This grant also provided an opportunity to forge partnerships with the South Carolina Aquarium and the SC Department of Natural Resources (SC DNR). The SC Aquarium is building on the high visibility of its acclaimed turtle hospital by producing a large poster exhibit that illustrates the effects of marine debris on marine turtle species. In addition, the SC Aquarium will be distributing turtle excluder devices for recreational crab traps. The Aquarium is also expanding its Barrier Island Internship program to include additional

information for vacationers about marine debris and what they can do to prevent it.

SC DNR has been awarded funding to expand its monofilament fishing line collection and recycling program. Under this grant, over 50 new collection bins will be installed at boat landings and parks throughout the coast. SC DNR estimates that with these additional bins, they will be able to collect and recycle over 800 additional pounds of fishing line each year.

Through these and other targeted efforts, SCDHEC and its partners are working to decrease the amount of marine debris in our coastal environment and help ensure the health and beauty of our coast for generations of turtles, birds and humans to come.

For more information, contact Dan Burger at burgerdj@dhec.sc.gov or call (843) 953-0251.

News to Use

Lake Water Quality Linked to Property Values

Taken from Ohio Sea Grant's *Twine Line* publication

Several studies around the country have shown the linkage between property values and water quality. Trends have revealed that when water clarity (how well you can see through the water) and water quality increases, so does the price of the lakeshore property.

A study funded through the Ohio Sea Grant examined both water quality and clarity. The research revealed that although both were valued by the homeowner, increased water clarity was found to increase the property value by a higher percentage (5%).

To determine where water clarity ranked, the study compared it to other home amenities that would raise the property value such as the number of bedrooms,

proximity to the beach, square footage, and the closest school district. The research found that increasing water clarity to two meters raised the price of the house more than if that same house was in a better school district.

With evidence out there linking water quality to an increase in economic value, the hope of this

research is to show the importance in finding a balance between economic growth and water quality protection.

For more information, visit http://www.ohioseagrant.osu.edu/_documents/twineline/v28i4.pdf. You can also visit: <http://www.maine.gov/dep/blwq/doclake/research.htm>.

Added Resale Value to Average Lakefront Homes

Lakefront Amenities

- Increase water quality.....+ \$108
- House distance from beach (per mile).....+\$1,188
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- Additional bathroom.....+\$7,270
- Additional fireplace.....+\$10,807
- Improved school system.....+\$3,764

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