



LOCKWOOD FOLLY RIVER WATER QUALITY STRATEGY

Lockwood Folly Watershed Roundtable



Garlands Repair Area – Photo by NCCF



Docks – Photo by NCCF

Growth: A Balancing Act

Brunswick County isn't a hidden treasure anymore. Since 1980 the county's population has tripled to more than 93,000, and another 35,000 residents are expected to arrive by 2020.

The tremendous influx of people earned Brunswick the title of 55th fastest growing county in the country between April 2000 and July 2006.

But the pressures of absorbing that much growth that quickly are being felt throughout the county, from crowded schools to clogged roads.

The environment is no exception.

For generations, locals have enjoyed the bounty of Lockwood Folly, a river and estuarine system between Holden Beach

and Oak Island famed for its rich shellfish beds.

But the surging development within the 150-square-mile watershed has had a severe effect on the health of the river.

The portion of the river closed to shellfishing has more than tripled from 18 percent in 1980 to 55 percent today.

Residents have just to look over the Cape Fear River to New Hanover County, where all but one of the county's tidal creeks are permanently closed to shellfishing, to see what unbridled growth can do to water quality.

Worried about the river's health and the continued viability of the local fishing industry the Brunswick County Board of Commissioners two years ago teamed up with the N.C. Coastal

Federation, the U.S. Environmental Protection Agency and the state Ecosystem Enhancement Program to establish the Lockwood Folly Watershed Roundtable.

The eight-member group, which included participants from a range of backgrounds, was tasked with developing strategies to balance development with the needs of the environment. The resulting proposal creates a blueprint for "green" growth. The Board of Commissioners voted to accept the strategies in February and will convene work sessions in the coming months to plan implementation.

The strategies range from educating the public about the importance of protecting water quality changing land-development policies to protect vulnerable water quality.

Together, they offer Brunswick County a roadmap to a future where development doesn't have to come at the expense of the environment.

"We thank the roundtable for its dedicated work in crafting these strategies," said David Sandifer, chairman of the county commission. "It will take a combination of these techniques and sustained effort from everyone for our county to grow wisely while protecting our natural environment."

"We thank the roundtable for its dedicated work in crafting these strategies"

–DAVID SANDIFER

Stormwater and Low Impact Development

Stormwater runoff is the top pollutant of North Carolina's coastal waters.

The idea of low impact development, or LID, is to catch and treat runoff from roofs, driveways, streets and other impervious surfaces on site before it reaches a stream, channel or culvert – and eventually the Lockwood Folly River.

LID does not limit a site's development potential but instead calls for developing more thoughtfully by using the landscape and small-scaled engineer techniques to keep water where it falls.

An economic study by N.C. State University demonstrated that using LID practices instead of conventional development methods can reduce the costs of expensive stormwater ponds, resulting in substantial savings for the developer.

Along with gaining favored status in stormwater planning, LID also would be integrated into development policies for the watershed.

Another Roundtable strategy calls for extending sewer service to portions of the watershed where there's a history of failing septic systems, another major source of pollution in the river.

The Roundtable recommendations also include promoting increased coordination between federal, state and local agencies to streamline and better focus the regulatory oversight within the watershed.

But the citizen group wasn't interested in just passive ways to stabilize the river's health, but also wanted to actively protect water quality and jumpstart the recovery process.

That includes seeking partners, from both the public and private sectors, to help acquire from willing sellers land critical to protecting water quality.

Programs to retrofit existing properties, since runoff from them is the cause of many of the river's current woes, also are proposed along with new initiatives to stabilize eroding shorelines.

In all, the ten strategies recommended by the Roundtable are intended to complement, not hinder development in the Lockwood Folly watershed.

By working with developers and reaching out to residents, the foundation for a healthier Lockwood Folly watershed where development and the environment can coexist becomes an attainable goal.

We welcome your help as we work to keep the Lockwood Folly River a resource we all can continue to enjoy.



Mr. Harry Varnam – circa 1950



Strategies FOR THE LOCKWOOD FOLLY RIVER: Prevention, Planning and Strategic Restoration

The following is a brief outline of the strategies accepted by the Brunswick County Commission. The County will be conducting work sessions in upcoming months to explore ways of prioritizing and implementing the strategies to protect and restore the river. For more the full Roundtable report and notices about the work sessions, visit the county's website at www.brunsko.net.

These strategies are designed to guide future growth and development in the watershed and set priorities to preserve fragile habitat and restore degraded water quality. All of the experts and Roundtable members emphasize that no single strategy is a 'silver bullet'. Lasting, significant changes in the downward trend of water quality in the Lockwood Folly River will take coordinated implementation of all of these strategies.

(1)

A) Assess water quality risk according to natural systems in the watershed and develop future land use policies and ordinances that fit land use density and landscape design to the level of water quality risk.

B) Sewer extension policies that: 1) give priority services to communities with malfunctioning septic tanks, and 2) ensure that land use and development policies in wastewater service areas are consistent with risks to water quality.

These strategies would look at hydrologic features and assign water quality risk factors and use them to determine

the appropriate type and density of development. Possible implementation options include using cluster housing neighborhood design for a given amount of development and limiting built-upon surfaces in the most vulnerable areas.



Public Meeting-Photo by, NCCF

(2) Incorporate low impact development (LID) technology into county site design and development policies. The strategy will include methods to integrate this tool into the county's existing development management program as an option for developers. LID is a comprehensive land planning and engineering design approach that seeks to maintain and improve the pre-development hydrology of a developing watershed. LID uses the natural capacity of land to soak up rainfall and prevent contaminated stormwater runoff from entering water bodies. These techniques were the basis for a national conference held in Wilmington in

March, which featured Brunswick County's work on the Lockwood Folly as a case study. For more information about LID, visit www.lowimpactdevelopment.org.

(3) Coordinate state, local and federal regulatory programs with Brunswick County taking the lead enforcement role and fostering inter-local cooperation. This strategy suggests policy changes and a financial plan to implement it.

(4) Create an action plan to acquire strategic sites and properties to protect and restore water quality. Sites would be targeted according to a comprehensive selection method, and would be acquired from willing property owners by partnerships with the nonprofit community and state and federal agencies.

(5)

A) Develop a public education, information and outreach program. Involve the public so that protecting and restoring water quality in the Lockwood Folly River becomes an important local priority.

B) Recognize the environmental and cultural significance of the Lockwood Folly River through federal Wild and Scenic River designation. This non-regulatory designation will underscore the special nature of the river as development in the area continues to increase.

(6) Protect stream edges in the watershed by implementing a 'living shorelines' program. A living shoreline is an innovative alternative to bulkheads for shoreline stabilization, erosion control and stormwater buffer and wildlife habitat restoration. This strategy involves possibly creating a cost-share program for living shoreline restoration projects and incorporating language supporting living shorelines into the county's CAMA land use plan.

(7) Identify sites for water quality 'retrofit' to reduce or eliminate unwanted runoff. The county should work with state agencies such as the NC Ecosystem Enhancement Program and non-profit organizations to secure funding to address targeted sites for retrofit identified by the Roundtable.

(8) Develop a financial incentive program that encourages developers to take alternative approaches that support water quality objectives. Development practices, such as LID, conservation easements and preservation of wetlands, which are protective of water quality, would be rewarded with mechanisms such as a streamlined review process, favorable ad valorem tax treatment, and tax-advantaged donations.

(9) Develop a working waterfront program that assists in the preservation of traditional waterfront businesses, such as fish houses and commercial marinas, and public access sites, such as boat ramps and fishing piers.

The full report on the Roundtable's findings and strategy implementation options and the first tabloid are available on the county's website at www.brunsko.net. Check the website for notice of the work sessions that the county will hold to plan to how to put the strategies into action.



LEARN MORE ABOUT WATER QUALITY:

Brunswick County
www.brunswickcountync.gov

NC Ecosystem Enhancement Program (EEP)
www.nceep.net

NC Stormwater Program
www.ncstormwater.org

US EPA 303(d) list of impaired water bodies
h2o.enr.state.nc.us/tmdl/General_303d.htm#Downloads

NC Division of Water Quality (DWQ)
h2o.enr.state.nc.us

NC Division of Coastal Management (DCM)
dcm2.enr.state.nc.us

NC Division of Environmental Health, Shellfish Sanitation
and Recreational Water Quality Section (DEH)
www.deh.enr.state.nc.us/shellfish/index.html

North Carolina Coastal Federation
www.nccoast.org

Help Protect the River

Check the county's website to see the full draft report and to find out about the upcoming work sessions.



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