

GREEN, GREAT & GLOBAL:

The dangers of not going green

The Catawba could dry up, farmland become scarce, air quality worsen. To become a global player, the Charlotte region must better protect its strained natural resources.

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Fourth in a four-part series.

"Green" is in. President-elect Obama says it. Top corporations are onto the idea. Environmentalists are basking in the new sunshine on their cause. But is the Charlotte region ready – or even interested?

For four months in this series we've advocated "great, green and global" for the Charlotte region's 21st-century success – transit first, more compact development, focus on solar development and more. But if there's a dangerously weak link in the chain, it's "green."

Why? The region's development typically has come at the expense of safeguarding its natural resources. There's been frequent inattention to assaults on water and air quality. And the region has been slow to recognize the importance of reducing carbon emissions – the overwhelming environmental issue of our time.

This is not a ho-hum story about tree-hugging extremism. If Charlotte is to survive in a post-banking future it must reinvent itself. Going green will be a critical element of any region's reinvention. And it will be central to Charlotte's hopes to be a strong global player.

The problems are substantial. Consider Charlotte planner Michael Gallis' recent digitized analysis of the environmental networks of the southeastern U.S. Piedmont. Gallis found massive human impacts. Humans have negatively altered all of the major and most of the minor Piedmont streams. Starting with the first white settlers, they straightened waterways, cutting the river birch, pines and oak on the banks that previously retained water. They crashed through the swamps, cut through the forests.

The first generations cleared much of the flat land for farming; now suburbanization consumes more and more of the forest. Roads and settlement have severely fragmented ecosystems throughout the region. Its natural landscape is afflicted by fragmentation, depletion, pollution and now extinction of high percentages of original native plant species.

Indeed, the 24-county area from the Blue Ridge Mountains to Rockingham lost more than 100 acres a day to development 1976-2006, according to a UNC Charlotte study looking at satellite and census data. Mecklenburg County's figures were especially disturbing: 58 percent of the county was developed in 2006, more than quadruple the 13 percent in 1976. If that rate continued, development would devour 97 percent of the county by 2030. Open space would shrink to what UNCC's professor of architecture David Walters calls "less than a thimble-full."

To be sure, there are encouraging signs of regional progress on environmental issues, although the recession is slowing things down. Welcome initiatives range from Duke Power's "save-a-watt" program and Bank of America's "green" buildings to Charlotte's considering creating a "green czar" in city government. The Centralina and Catawba Regional Councils of Governments have spent years trying to promote an environmental angle to regional governance, most recently with their ambitious CONNECT effort. (See "Create Vision, Take Action," at right.)



Seen above the trees, Charlotte's skyline shows the affluence its banking past brought. For a prosperous future, the region should adopt a more environmentally sensitive attitude. GARY O'BRIEN
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A Regional Environmental Summit last spring reviewed a range of challenges, from energy to land use to preserving open space. Several major local corporations are looking into solar power and other green business opportunities. Because of water supply worries, conservation groups are urging coordinated action to safeguard the Catawba and Yadkin River watersheds. Area businesses cooperate in a "Clean Air Works" program to reduce ozone on hot days, encouraging employees to carpool, use transit or telecommute.

There's active interest in conserving land and in the exciting efforts by the Catawba Lands Conservancy and Trust for Public Land for an ambitious Carolina Thread Trail, a network of greenways straddling the state line. In the face of endemic sprawl, the region does have a few more compact, energy-saving communities (Davidson, Fort Mill's Baxter development and others). Charlotte City Council has adopted policies to make its streets pedestrian- and bike-friendly.

But does all that make the metro area a truly "green" place, a front-tier U.S. region with a green agenda, like Portland, Ore., Seattle or Chicago? Can it sit back and let "the powers that be" work things out? Hardly.

First, consider history. With its history of post-Civil War poverty, the region instinctively welcomes "growth" without much concern for potential downsides. Reform is tough here. One strong thread in the cultural history, shaped by early Scots-Irish settlers, is a prickly independence and strong antipathy to planning. The ideal of homes on large, woody lots is deeply ingrained.

What about sheer numbers? The region's population has spurted. At roughly 1 million in 1960, today the 14 N.C. and S.C. counties we studied have about 2.4 million people, headed for some 3.6 million in 2030. That means a continued drumbeat of development demands, on top of an already strained natural environment.

If that growth were focused in urbanized places, the danger to the region's environment might be minimized. But it's not.

While Charlotte-Mecklenburg growth rates have been high, counties such as Union, Iredell, Cabarrus and York have also expanded rapidly, often with fewer environmental safeguards such as protections against clear-cutting or any but minimal public transportation options.

In Union and Cabarrus counties, for example, sprawl is gobbling acreage at a rapid pace, with development consuming 0.48 and 0.42 acres per person in 2006, roughly double Mecklenburg's 0.23-per-person average. Longer distances mean more driving. That emits more dangerous nitrogen oxides. (Cabarrus, to its credit, has recently adopted growth boundaries around developed areas to try to focus growth into the towns and preserve agriculture.)

Another sprawl byproduct: climate change with the massive perils it poses, not just for rising seas but shifting climate belts, periods of intense storms and intense drought, species loss and food emergencies. The Charlotte region's carbon footprint is among the nation's heaviest, a recent Brookings Institution study found. The study rated 100 large regions from least footprint to biggest – and Charlotte ranked down at No. 72, with emissions rising significantly faster than the national average.

The urban regions with aggressive climate strategies – from Burlington, Vt., to the San Francisco Bay region – engage government, businesses and nonprofits in setting goals and acting. Some of their governments boast entire departments devoted to carbon and related eco-issues.

But not here. Duke Energy says demand will oblige it to build another coal-burning power plant – notwithstanding coal's role as the world's leading source of carbon dioxide emissions. (Duke says the plant will emit less carbon dioxide and other dangerous chemicals than the two it would replace.)

There's lots of interest in climate change among UNCC faculty, and many U.S. universities are becoming regional leaders on the issue. But UNCC isn't among the 587 U.S. colleges and universities – UNC Chapel Hill included – whose presidents have pledged to reduce their greenhouse-gas impact to zero.

Charlotte's next challenge, if it's to shine green, is water. The nonprofit American Rivers group declared the Catawba the nation's most imperiled river, and Monday held a news conference to

deplore a lack of action by either of the Carolinas. Droughts in 2002 and 2007-08 have raised concern about this great metropolitan region one day going dry. Water quality in the Catawba, on which 1.2 million people depend, is in danger of falling below acceptable limits.

Why? The Catawba usually provides a strong flow of clean water from its mountain headwaters, running rapidly through the tumultuous growth of real estate projects – and human demand – in the region. But development along and near its banks sends silt into streams, smothering clams, eels and mussels that normally filter out contaminants. Silt affects water flows that used to be slow through naturally vegetated streams. Now, in heavy rainfall the streambeds are heavily eroded. Those eroded banks lose their ability to absorb water, so in times of low rainfall they can go dry. The city of Charlotte alone loses 13 billion to 31 billion gallons of water a year in runoff, according to American Rivers. That rainwater used to seep into the soil, where it was purified and replenished groundwater. Now, because of overpaving, it pours into sewers as polluted runoff and rushes into creeks and rivers, scouring the banks.

“The river,” says Rick Gaskins of the Catawba Riverkeepers, “is a microcosm of the global warming issue. We’re at a tipping point, because of the time it takes to turn things around.”

It's true a new coalition of water directors along the river, joined by Duke Energy (a major water user, to cool power plants), focuses on the river flow. Last summer the coalition advanced such measures as once-a-week watering.

Charlotte environmental lawyer David Franchina says, “The Catawba is just a chain of dams – not much river left.”

The big issue, he says, isn't the legal maneuvering over transferring water between watersheds, but “how much, long-term, will the natural water system sustain?” Charlotte-Mecklenburg's current use of 90 million gallons a day, he notes, soars to 140 million gallons with spring and summer lawn watering. The projection for the next 50 years is ominous: Those numbers may as much as triple, well beyond the river's likely or even possible flow.

Add to that development pressure in the Yadkin-Pee Dee watershed, which has a larger geographic footprint in the region and is heavily affected by today's sprawling growth.

Another question mark about the region's environmental credentials: Its slow progress in promoting new buildings that meet the U.S. Green Building Council's LEED (Leadership in Energy & Environmental Design) rating system. Such cities as Atlanta, Seattle, Washington, Boston, Philadelphia, San Francisco and Portland, Ore., have moved much more rapidly than Charlotte on this. With Bank of America leadership, substantially more LEED-level construction is on its way. But no local city government codes require or emulate LEED standards, a step more progressive communities are taking. The Charlotte City Council recently balked at adding an energy-saving green roof to a new city building, citing its cost.

Further, despite Charlotte-Mecklenburg's improved bus system and the opening of its light-rail line, most of the region relies overwhelmingly on private auto. Most counties have minimal public transport.

The bottom line: This city *and* region have a long way to go if they hope to safeguard natural assets and develop the range of “green” systems that will open the doors to environmental safety, public health and economic success in the 21st century.

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