



January 11, 2010

Computer tool offers possible model of Western North Carolina's green spaces in 2030

Dale Neal

Computers aren't crystal balls, but new models allow a glimpse into what parts of Western North Carolina will remain green and which could be developed over the next 20 years.

Planners are using a new computer tool to map a network of the green spaces in four counties around Asheville, balancing development of new homes and business against the protection of watersheds, forests and farms.

Infrastructure

When planners talk about infrastructure, they are usually discussing man-made roads, water and sewer lines, said Jim Stokoe, a planner for the Land-of-Sky Regional Council. But the mountains offer a natural infrastructure for human communities.

"We link our waterlines to the clean water that nature provides for us," Stokoe said. "This is not just feel-good stuff. These are our life-support systems."

Linking Lands and Communities, a \$225,000 project by the regional council, relies on a new tool developed through the Renaissance Computing Institute. Researchers at UNC Asheville and UNC Charlotte have married satellite data with census data, population and development trends to design a computer model of what WNC could look like by the year 2030.

Since 1976, the rate of development has outpaced population growth by 10-to-1 in Buncombe, Madison, Henderson and Transylvania counties. Subdivisions, retail centers, parking lots and other buildings have increased 500 percent at a rate of 6 acres a day, the model shows.

If that trend continues, another 75 square miles of the four-county region could be built up by the year 2030, the model shows.

Undeveloped lands still make up more than half of the property in the four counties.

The green spaces network will help planners, developers, farmers, conservationists and others decide what to do with that land.

"It's kind of refocusing your lens as a society and looking at those four counties with different glasses," said Phyllis Stiles of Blue Ridge Forever, a coalition of area conservation groups, which has worked on the Linking Lands project. "You start to look at your resources at a different way. We take them for granted at our peril."

Farmlands providing local food or flood control, and forests providing habitat for wildlife and scenic views for tourism are all lifelines that feed the local economy.

“You see those maps, and you start to see where our forests are that are cleaning carbon dioxide from the air or recharging our groundwater,” Stiles said.

The network will also show links between the green spaces that will allow for bears and wildlife to migrate away from developed areas. The network plan should be rolled out later this spring, Stokoe said, providing workshops for city and county planners and elected officials in the four-county region. “We don’t want this plan to go onto a shelf and not be used.”

“The data is not going to make the decisions for us,” said Jim Fox, director of the RENCI at UNCA Engagement Site in downtown Asheville. “With these data sets, we can have a discussion about what are the things we value. How much do we value clean water? How much do we value jobs? Where are the areas where we want to grow?”

Developers are also backing the regional network project, which could make potential building projects less contentious in the future, said Mike Butrum, government affairs director of the Asheville Area Board of Realtors.

“You have 99 percent of builders who want to do the right thing. This will be just one more step where we might be able to develop land properly or preserve it,” he said.

Additional Facts

Growth by the numbers

The Urban Growth Model developed by Renaissance Computing Institute researchers in Asheville and Charlotte showed several trends for development in Buncombe, Henderson, Madison and Transylvania counties:

- Development increased nearly 500 percent between 1976-2006 at an average rate of 6 acres per day.

Current trends show that an additional 47,489 acres of forests and farmlands will be developed in the four counties by 2030, or a rate of 5.9 acres per day.

Population is expected to jump 23 percent from 394,469 in 2010 to 486,153 by 2030.

Protected lands actually increased from 18 percent in 1976 to 25 percent of total land by 2006 with the creation of Gorges State Park, DuPont State Forest and Hickory Nut Gorge State Park as well as private conservation easements.

Source: RENCI
