

Land-use Planning Vital for Healthy Piedmont

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The North Carolina Piedmont is home to most of the state's centers of population and economic development. The growth this region is experiencing brings with it the potential for economic prosperity, but it often comes at a cost to our quality of life in general and our air quality and health in particular. Clearly, we can grow and still maintain a healthy environment in which to live, work, and breathe, but to do so we must be keenly aware of the impact we are having on our environment. Fortunately, what is good for our air quality is also good for building community, for improving our quality of life and for ensuring the health of our citizens.

When we outline the challenges, we soon realize that the solutions can be achieved with careful planning. In the past few years, we have become increasingly aware of air quality problems in Piedmont North Carolina. In 2004, three of the region's urban areas found themselves on the American Lung Association's top-25 list of metropolitan areas with the worst ozone pollution in the United States: Charlotte-Gastonia-Salisbury ranked 14th; Greensboro-Winston-Salem-High Point was 16th; and Raleigh-Durham-Cary was 23rd. This environmental challenge impacts our health, the health of our communities and the quality of life our citizens enjoy.

We know that the two primary sources of air pollution are industry and mobile sources. The fact that automobiles are one of the major culprits makes the role of planners all the more important in our efforts to reduce air pollution. Charlotte Mayor Pat McCrory states it well: Land-use planning will have a bigger impact on air quality than anything else. He recommends that communities develop a grid system of roads, provide pedestrian-friendly access and have an overall transit plan to complement road building. Urban designer, educator and author David Walters echoes McCrory's comments. He contends that compact, mixed-use, walkable communities are vital to a healthy and sustainable future.

Thoughtful planning is even more important in

light of the fact that we are going to experience incredible growth in the next few years. The population of the 13-county region surrounding Charlotte/Mecklenburg grew nearly 34 percent from 1990 to 2003. It is projected to grow to about 2.5 million by 2010, according to Voices & Choices 2004 State of the Region Report.

These realities are further complicated by the fact that we are losing our natural filtering system – our tree canopy. David Nowak, a research forester with the USDA Forest Service, found that trees in just two counties in the greater Chicago region removed a daily average of 1.3 tons of carbon monoxide, four tons of sulfur dioxide, 4.2 tons of nitrogen dioxide and 11.9 tons of ozone. The monetary value of that pollution removal, incidentally, was \$9.2 million, according to Nowak. More growth of the kind we have experienced in the past translates to additional tree canopy loss. Right now, the City of Salisbury and its Planning Department are looking at ways to incorporate the preservation of tree canopy into their long-range planning. They are doing that through an ecosystem analysis, something the Charlotte/Mecklenburg area has already done.

Preserving our tree canopy and planning for growth are critical to good air quality, and healthy air is clearly critical to the health of our cities and towns and to the health of our citizens. Dr. Clay Ballantine, a nationally recognized authority on the relationship between air quality and health, cites a study by Abt Associates which states that between one-third and one-half of all asthma in North Carolina is due to air pollution. This translates, he says, into a quarter of a million asthma attacks, 6,000 emergency room visits and almost 2,000 hospital admissions over the course of a year. Lung-related deaths in the state are also increasing. Dr. Ballantine notes that we lose about 23,000 people a year to air pollution-related health effects. Exposure to fine particulate matter is like "living with a smoker," he says.

A study published in a 2004 issue of Public Health speaks directly to the relationship between

land-use planning and our health. The report, called “Suburban Sprawl Affects Your Health,” revealed a correlation between unplanned growth and a number of ailments. It found rates of arthritis, asthma, headaches and other complaints increased with the amount of sprawl.

The answers to this dilemma are really things we would all like to have. Think of the more traditional neighborhood that features sidewalks where children can walk to the park and adults can walk to shops, where a grid pattern of streets allows multiple ways in and out of neighborhoods. This approach to development clearly reduces traffic congestion – and air pollution – but it also gives us

a sense of community and opportunities to live a healthier life.

Our policy makers, planners and developers have a golden opportunity to guide our communities in ways that will preserve our resources and protect our health. The Catawba College Center for the Environment will host an air quality conference in March 2006 that will give decision makers an opportunity to learn more about the challenges we face and to discuss viable solutions. We hope the planning community will participate in this important discussion. The future of the Piedmont depends on the land-use decisions we make today. ■