VIEWPOINT

Planning and the Environment: The Need for a Common Ground

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Carolina Planning occasionally includes Viewpoint articles which offer commentary on planning issues and provide a forum for personal opinion and debate on current topics of interest to planners.

The intent of this article is to examine the nexus between planning and the environment—specifically, to examine how concern for the environment has influenced planning, and how planning has played an increasingly important role in assuring protection of the environment. In this Twentieth Anniversary Issue of *Carolina Planning*, I will address how the role of the environment in planning has evolved over the last twenty years and suggest how planning and protection of our natural resources may conjoin in the future.

The Past Twenty Years

National Trends

Twenty years ago was a triumphant time for environmentalists and planners, but the ensuing twenty years were marked by innumerable jolts, bumps, and grinding halts. At the federal level, two major successes for the environment were the passage of the National Environmental Policy Act (NEPA) and the Endangered Species Act. In addition, other important pieces of legislation were passed that impacted land use, ranging from the Alaskan Lands Act to the setting aside of many thousands of acres of land in North Carolina as protected wilderness. These legislative achievements made significant progress in reforming many of the worst land use practices that were threatening our public health and damaging our natural resources. The Clean Water Act and the Clean Air Act followed, and they too have met many of their public policy goals. All of these hard won victories are threatened today as legislative attempts at both the federal and state levels seek to roll back or weaken environmental regulations and policies designed to protect our public health and our natural resources.

In North Carolina

In 1974, North Carolina placed itself in the forefront nationally with regards to land use planning with the passage of the Coastal Area Management Act (CAMA). CAMA was considered by many to be one of the best pieces of coastal management legislation in the nation. If we view the past twenty years as a roller coaster ride, CAMA represents the high point of our ride. That is not to say that environmentalists and planners have no other "thrills" to savor—we can rightly point to the passage of the Mountain Ridge Protection Act in 1983 and the Watershed Protection Act in 1989 as other high points. The low point of our ride was the 1995 passage of Representative Nichols' Private Property Protection Act in the lower House of the North Carolina General Assembly, which would have made effective land use planning impossible. The North Carolina Senate prevented passage of this bill, which was one of the most anti-planning, anti-environment pieces of legislation in the country.

Those who believe in protecting the environment and planning have been more involved in fighting defensive actions and preventing defeats than in winning victories. All is not doom and gloom, however. Environmentalists have shaped the politics of planning, and planners have shaped the politics of envi-

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ronmental protection. Much of the rest of this article will examine the interaction between planning and environmentalism.

The Shaping of an Environmentalist and Planning Advocate

When I first journeyed to England in the 1980s and 1990s, I began to understand the connection between planning and protection of our resources. I spent three days walking from village to village along the Cotswald Way, a 100-mile path from Bath to Chipping Camden. This public walking path passes entirely through privately held lands. What most astonished me about this walk was the sense one had of being able to literally step from the countryside into a village, walk through it, and then step back into the countryside. Richard Bate, formerly a senior planner with the Council for the Protection of Rural England, at a Conference in 1989, stated that "England has managed to say 'this is town; this is country' and you can tell when you move from one to another." The English have established the objective of protecting the countryside for its own sake as national policy.

We know that we cannot protect our countryside without planning.

In North Carolina where the distinction between town and country has become increasingly blurred, I began to see sprawl with very different eyes. I knew that we had an alternative. I understood that we must move beyond, as Richard Bate put it, "the idea of conservation as an issue of protecting oases in a sea of mediocrity." Over the past hundred years, most of the environmental movement's initiatives related to land protection in the U.S. have been designed around the need to preserve lands with special beauty or unique natural features. Unfortunately, our national parks and forests are increasingly becoming oases surrounded by Bate's sea of mediocrity. As our cities and towns consume our land resources at ever increasing rates, we are losing scenic countryside as well. This is where planning meets protection of our natural resources. We know that we cannot protect our countryside without planning. We are also starting to realize that we will ultimately fail to protect our wilderness areas without comprehensive planning at the local, regional, and state level.

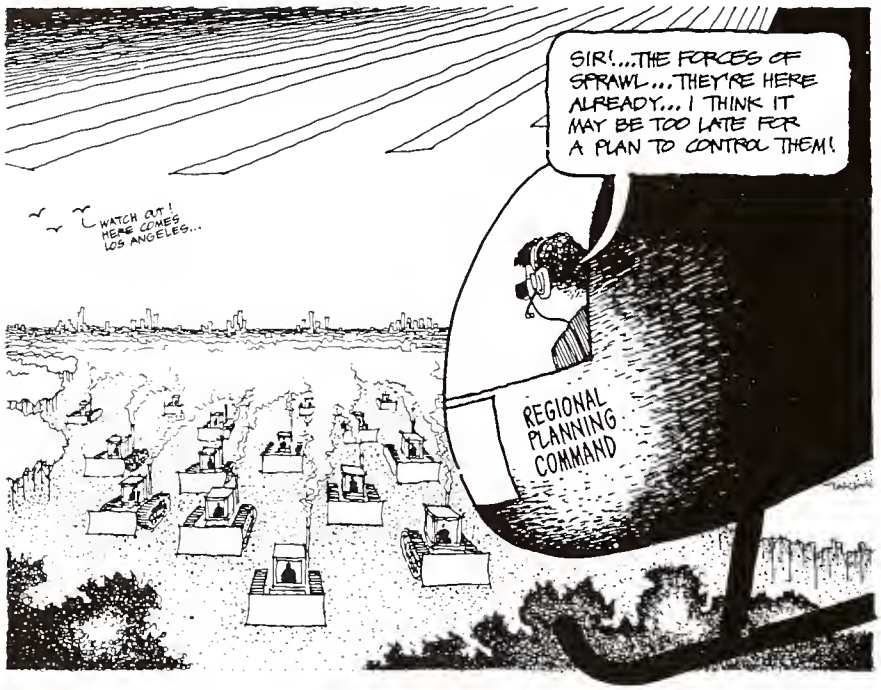
The Impacts of Unplanned Growth on the Environment

Sprawl. We know it when we see it—strip shopping malls, traffic congestion, low-density residential development. While our cities have grown tremendously in size, the number of people per acre has fallen. With each new census report we learn that fewer people occupy an acre of land than ever before. This decline in population density has not been limited to our major metropolitan areas but can also be observed in smaller towns like Fayetteville and Hickory, North Carolina. If the current population density in Charlotte equaled the level of density that existed in 1940, the city would occupy about 40% of the land it does now. Similarly, if the current population density of Raleigh equaled that of 1900, that city would occupy 30% of its current area.

The rural Piedmont is rapidly disappearing in response to the intensely land consumptive patterns of development that we have today. Walking in the Piedmont three hundred years ago we probably would have encountered "chestnuts, white oaks, mokernut hickories and tulip trees immense and widely spaced . . . many more than four feet in diameter . . . [Now] the Piedmont is either plowed, paved or in succession" (Godfrey, 1980, 25). The amount of land that is paved or otherwise covered by impermeable surfaces has reached the point where the Piedmont was recently identified as the fifth most threatened agricultural zone in the country (Busby and Schenck, 1994, 27). The most dramatic feature of the Piedmont today is the sprawling urbanization of the region.

This has had many ugly consequences, one of the foremost being the loss of trees—grand oaks and tulip poplars, hickories and beeches. Bulldozers push the grand trees over and they are hauled off in pieces. In their place are erected one story buildings surrounded by vast tracts of asphalt. Landscaping crews then descend and plant Bradford Pears and other ornamental trees that will never replace the sweep and grandeur of mature, full bodied hardwoods. And so the landscape is reduced and diminished, and we in return are diminished as well.

John Muir, founder of the Sierra Club, recognized how easily we can lose that which adds so much value to our communities when he wrote nearly 100 years



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ago, "Any fool can destroy trees . . . God has cared for these trees, saved them from drought, disease, avalanches, and a thousand straining, leveling tempests and floods; but he cannot save them from fools." (Muir, quoted in Teale, 1954, 231) Today, one hundred years later, we have fools who still recklessly destroy trees and, in the process, reduce the quality of our communities.

The Costs of Sprawl

Unfortunately, sprawl is not recognized as a problem by many citizens, since they think that we still have plenty of undeveloped land. While we do have undeveloped land and room for more sprawl, the costs to the environment and to our quality of life are severe, and it is here that we find the nexus between environmentalism and planning. Planners must address the environmentally adverse consequences of sprawl.

Sprawl leads to increased dependence and reliance on the automobile. The number of vehicle miles traveled, along with the percentage of single occupancy vehicles, increases significantly with dispersed developments as people become ever more car dependent, resulting in significantly higher use of fossil fuels. Between 1980 and 1990 in Raleigh-Durham, the Triad, and in Charlotte, traffic congestion and travel time to work increased over 16%. Furthermore, automobile exhaust has long been recognized as a major source of air pollution in our metropolitan areas. Nine counties—all in the Piedmont and all heavily urban—were cited for non-attainment for ozone under the 1990 Clean Air Act.

Low density developments use our land resources inefficiently, forcing more miles of roads, storm drainage, pipes, fiber optic cables, electrical wires, and other networks to be extended across the landscape, at increasing cost to the taxpayers. One study documented that a typical house located on a large lot and far from central facilities costs $24,000 more for services than one centrally located in a denser housing development (Frank, 1989). Also, in terms of housing costs, land and site preparation is typically more expensive for large lots. A South Carolina study estimated that higher density development would reduce the costs of a house by $10,000 in land and site preparation costs (Busby and Schenck, 1994, 17).

Sprawl impacts water quality as well. Increasingly, many North Carolina communities are needing to expand their wastewater treatment plants in response to increased demand for services from new residents, but often the costs are prohibitive. During heavy rains, stormwater infiltrates sewer lines, often overloading the capacity of the plant and forcing the release of raw sewage into the water supply. In addition, many of North Carolina's rivers have experienced degradation as a result of urban runoff and construction. Between 1986 and 1991, for example, urban development degraded an additional 500 plus miles of the Catawba, the French Broad, and the Yadkin-Pee Dee Rivers (Busby and Schenck, 1994, 25).

Another example concerns estuaries and shellfish. A 1988 study by the state's Shellfish Sanitation Program concluded that population growth and its associated land use problems—urban runoff, inadequate wastewater treatment, and beachfront ero-

sion—posed the single greatest threat to shellfish resources in years to come. In the 1980s, population growth and development was the major cause of increased shellfish bed closures in counties which experienced increased closures (Busby and Schenck, 1994, 33).

Sprawl also impacts wildlife by contributing to forest loss. According to the U.S. Forest Service, over 1.2 million acres of forest land were urbanized in North Carolina between 1964 and 1990. Most of that was in the Piedmont. At the same time 59 of 153 species of birds declined in North Carolina, some by as much as 27% per year. The loss of forests and old fields to urbanization, particularly in eastern and northern North Carolina, was cited as a major cause of the decline (Busby and Schenck, 1994, 28).

Finally, sprawl entails a loss of our communities' distinctiveness. In place of natural areas and neighborhoods with diverse architecture and inviting landscapes we increasingly see cookie-cutter neighborhoods and strip shopping malls with chain stores that resemble those in any other American city.

The Dominant Paradigms of the Past Fifty Years: Environmentally Unfriendly

To the extent that they support sprawl, the planning paradigms of the past fifty years have not been environmentally friendly. Most current zoning regulations are recipes for increased sprawl. Some planners and environmentalists with long-range vision are beginning to identify the connections between the human community and the land community and to advocate for changes in our dominant land development patterns. Others in the planning community, however, have not yet recognized this undeniable connection between human and land communities. Failure to adequately value the natural environment and the need for biological diversity risks harming the human community in the long run. Chief Joseph Seattle recognized this connection in his 1854 speech when he said, "The earth does not belong to man; man belongs to the earth. This we know. All things are connected like the blood which unites one family... .Whatever befalls the earth befalls the sons of the earth. Man did not weave the web of life, he is merely a strand in it. Whatever he does to the web, he does to himself."

This insight identifies another dilemma faced by today's planners—that of artificial boundaries drawn around cities, counties, and states that generally have little or no connection to the natural features within. These artificial boundaries, along with planning's focus on local as opposed to regional areas, act as significant constraints to effective land use planning.

The Need for a Biocentric Perspective

One of the major insights developed by the environmental community over the past ten years is the need to view the world around us as a network of bioregions. Bioregions are defined by the nature of the landscape, the land's natural features, and the plants and animals that live together in particular habitats. Watersheds are the most readily observable example. In the Research Triangle region, battles have been raging for many years over protection of the Falls Lake Watershed. Simple truths emerge. Water and the waste it carries flow downhill. Why should upstream residents care about downstream residents? They are governed by different governmental units and have no mutual obligations. Towns located downstream have little recourse to assure protection of their water resources if much of the watershed lies outside of their jurisdiction. Although many now recognize the need for a bioregional approach to environmental protection, the planners are severely constrained by boundaries that are nonsensical from a biocentric perspective.

Planners also need to consider the land ethic laid out by Aldo Leopold in *A Sand County Almanac*. "A thing is right," he wrote, "when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends to do otherwise" (Leopold, 1966, 262). Leopold recognized that the dominant anthropocentric view was leading us away from preservation of the biotic community. We may imagine that we are separate from the biotic community, but we separate ourselves from it at our peril. Certainly, we cannot sustain quality life in the long term if we plan for the human community while ignoring the biotic community.

This tension between the needs of the biotic and human communities is difficult to resolve. While many reasons exist for our inability or, truthfully, our unwillingness to try to effectively address this issue, the primary reason is the dominance of the assumption that growth is good. Growth is given as the answer to our myriad problems. But we cannot grow forever. We can grow until our open spaces are gone and we are dependent on bottled water because our water supply watersheds have been densely developed and the waters within irrevocably polluted. We can grow until air pollution induced respiratory prob-

lems are as frequent as the common cold and traffic congestion has reduced the average car speed to below ten miles an hour. But we cannot grow forever. We risk consuming our host, this remarkable planet Earth.

We have finally begun to consider issues of sustainability and carrying capacity. How much growth can our air, water, and land resources sustain and still provide us with a high quality of life? This seems to me the most important question that we must answer, or we risk irrevocably losing the quality of life in North Carolina that has attracted so many to this state and which has retained so many of the state's natives as residents. Without planning, we will not be able to protect our air, water, and land resources and ensure an acceptable quality of life.

The Need to Manage Growth

In my opinion, planners have a nearly Sisyphean task—to educate the public on the severe costs of sprawl and of the absolute necessity to manage growth. In the present political climate, embracing growth management is about as tempting as embracing a porcupine. Planners, however, must recognize that many citizens live in a black and white world and fail to understand how valuing both community and freedom may conflict.

Some citizens carry images in their minds that inadequately represent complex and often conflicting realities. For example, while many people feel that restrictions such as land use controls and zoning are to be feared, they do not realize that they will face increasing traffic congestion, polluted rivers, and the possibility of landfills, hazardous waste dumps, and hog farms near their properties without these restrictions. What is the way out of this dilemma? Unfortunately, no simple answer exists. All who care about their communities and the natural environment must work together to find ingenious solutions. It is said that 99% of genius is persistence, and unrelenting persistence will be required on the part of planners, environmentalists, and most importantly, an aware, reflective citizenry. We will need persistence in communicating with and involving our citizenry; persistence in acknowledging the results of a land use paradigm that results in more strip malls, sprawling developments, traffic congestion, pollution, and damage to the natural beauty of our mountains and coast. We will also need persistence in increasing the acceptance of a very different vision of the future that includes mixed-use developments, transit oriented developments, high-density new communities, "open space" developments, and greater reliance on mass transit and bicycling.

Planning and the Environment: The Next Twenty Years

Change is not easy. Just as one cannot stop an ocean liner instantly, neither can the dominant land development pattern of the past fifty years be brought to an abrupt halt. Setting a new course takes energy and, as with an ocean liner, course corrections are often required to avoid obstacles, even those that are well over the horizon and thus unseen.

If we want our communities to grow in a sustainable way and if we want to maintain the quality of our air, water, and land resources, we must change our land development priorities. We cannot afford to treat land as we treated air and water a hundred years ago, so that we only acknowledge the need to protect our common resources when they became so polluted that they threaten our health and that of our children. We need to begin comprehensive and systematic planning now so that we can protect our open spaces and countryside, and ensure the specialness of where we live. Only then will we have viable towns and efficient, livable cities which enhance the quality of our lives and which restore our sense of community and sense of place.

The most difficult challenge planners and environmentalists face in the future is that of forging a consensus among public officials and citizens that excessive and unplanned growth degrades our quality of life and is not sustainable. Planners and environmentalists will need to take the lead in shaping a new vision for the future which rests on a few simple principles:

1. Comprehensive planning needs to occur in each city and county. Plans should describe each community's vision of its desired future together with implementation strategies for achieving that desired state. Local plans are not enough, however. Regional plans ensure cooperation and coordination across multi-jurisdictional boundaries and ensure conservation and development of regional land, air, and water resources. State planning assures coordination among all state agencies while also addressing elements that cross regional boundaries like transportation and mountain and coastal resources.

2. Assessments of the carrying capacity of the air, water, and land resources must be conducted in each planning area. Plans for land conservation and development should be consistent with protection of public health and the resource base.

3. Rural character needs to be protected by ensuring a significant percentage of land is kept in production or as a working landscape for agriculture, forestry, or sustainable tourism. In order to do this, new development should be concentrated in existing towns. The creation of compact, efficient transit and pedestrian-oriented communities will create truly livable cities surrounded by productive farms, forest lands, and open space. Urban growth boundaries are needed to set limits to the extension of water and sewer services. Development of transit, homes, and business at urban densities should then occur inside the growth boundaries while strong development restrictions would exist on lands outside of the boundaries. Additionally, public assets such as scenic roads, waterways, and viewsheds must be protected through well-conceived land use and design standards.

4. Most of all, there must be a highly involved, reflective citizenry.

Twenty years from now, will we look back with pride and wonder at how we were able to protect our natural resources while building livable, sustainable communities? Or will we wonder why we never changed course and regret our failure to ensure a high quality of life for ourselves and our children? I hope we will have the wisdom, the courage, and the persistence to build a truly sustainable future. GP

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