

# Local Land-Use Planning and Natural Hazards in Coastal North Carolina

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The North Carolina Coastal Area Management Act (CAMA) of 1974 was designed to protect coastal resources. This legislation required local governments in the coastal region to develop land-use plans to guide development. While many saw a strong need to control growth in the region, few local governments managed land use. Proponents of the law believed that local land-use planning could protect the environment from unwise growth, while still allowing local control of development.

To determine CAMA's impact after more than a decade, we interviewed thirty local governments in North Carolina. This research was part of a larger National Science Foundation-sponsored study of land-use planning in North Carolina and four other states. The results from these interviews and additional surveys indicate that CAMA has played a critical role in shaping land-use planning in the coastal region. Furthermore, the evidence suggests that, while the mandate is still necessary to ensure local land-use planning in most communities, CAMA has increased support for planning and may be playing a long-term educational role. In this article, we provide a brief history of CAMA and its land-use planning requirements, particularly those related to natural hazards. We then examine the findings from our interviews and their implications for the future.

## History of CAMA and Land-Use Planning

Concern over the deteriorating state of the marine environment inspired federal legislators to pass the

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Coastal Zone Management Act (CZMA) in 1972. For some time, several different groups, including the American Law Institute and the National Governors' Conference, had been pushing both federal and state governments to endorse the twin concepts of national and state land-use planning. The Nixon Administration had hoped to pass a comprehensive national land-use planning bill which would include coastal zone management. However, a considerable portion of Congress opposed the concept of national land-use planning. As an alternative, members of Congress proposed a coastal zone management bill supporting national land-use planning in coastal areas only.<sup>1</sup>

The resulting Coastal Zone Management Act of 1972 encouraged states to use their authority to promote coastal planning. The act set up a federal agency with the authority and money to encourage states to promote land-use planning along the coast. Under the law, a state receives financial assistance if it develops and operates a coastal management program that meets federal approval. The Office of Coastal Zone Management in the National Oceanics and Atmospheric Administration (NOAA) is responsible for developing and revising the standards used to determine a federally-approved program. To receive approval, a state must identify inland coastal zone boundaries and permissible land uses within them; designate areas of critical concern; organize a feasible organizational structure within the state for controlling coastal resource uses; and coordinate program development within federal, state, regional and local governments. Moreover, to obtain cohesive regional policies, NOAA encourages the states to require local governments to collaborate on coastal land-use planning.<sup>2</sup>

In 1974, two years after passage of CZMA, the North Carolina legislature voted to adopt CAMA in response to concerns about uncontrolled growth along the coast

and encouraged by the new federal aid.<sup>3</sup> The law required all county governments in the twenty-county coastal region to produce land-use plans and submit them for approval to the state Coastal Resources Commission (CRC). Municipalities were allowed to make their own land-use plans, either separately or as a supplement to the county plans. The law also subjected all new development within state-defined Areas of Environmental Concern (AECs) to a permit process overseen jointly by the CRC and local governments.<sup>4</sup>

The CRC regulations guiding plan-making require certain issues to be addressed but do not specify the direction of local plans. Local governments are required to update the plan every five years. The state provided substantial assistance to local governments for the original planning effort and subsequently for the updates. If a county does not take on this planning responsibility or does not satisfy the CRC requirements, the state will complete a land-use plan for the county. Nineteen of the twenty counties complied with the initial regulations and met CRC approval in 1975. The remaining county, Carteret, challenged the constitutionality of CAMA, which was eventually upheld by the state's Supreme Court. In 1978, the CRC adopted a plan for Carteret County, which has since taken on the task of its own planning. Additionally, fifty-nine municipalities have voluntarily assumed some level of planning responsibility for their jurisdictions as of 1991.<sup>5</sup>

Although the original CAMA legislation addressed natural hazards, the initial focus was on environmental protection. The continuing threat posed by coastal storms led the CRC to expand their policies regarding natural hazards. Beginning with the first round of updates in 1979 and 1980, the CRC required localities to strengthen their hazard mitigation plans. During the 1985 update cycle, localities were required to address pre- and post-disaster mitigation. The current guidelines require that policies for damage prevention, emergency preparedness, and post-hazard reconstruction. The state does not expect to increase hazard-related components of the land-use plans.<sup>6</sup>

### Interviews and Data Collection

Implementation of CAMA has not only provided protection of valuable coastal resources, but has also significantly changed local land-use planning. For our study, thirty jurisdictions in the 20 county CAMA region were selected

at random from all counties and cities with 2,000 or more residents. The sample selected included fourteen counties and sixteen cities. Thirteen of these jurisdictions were on ocean; the rest were inland, usually adjacent to one of the Carolina Sounds. Similar samples were drawn in California, Florida, Texas, and Washington. Officials responsible for planning were interviewed during the summer of 1991. Local land-use plans were collected and evaluated on the extent of the factual basis, goal identification, and action recommendations for the hazard-related aspects of the plan. Additionally, state officials responsible for administering CAMA were interviewed. The interviews were designed to determine how CAMA guidelines had affected local planning and how much the jurisdictions relied on land-use plans to shape policy, particularly for natural hazards.

### Effects on Planning

CAMA has clearly increased the amount of land-use planning in the coastal region. Of the thirty jurisdictions in the sample, only eight, or 27 percent, indicated they had some form of land-use plan before CAMA. A comparison of the CAMA region with the North Carolina mountains suggests that this change is not the product of statewide changes in attitudes toward planning. The mountain counties are similar to the coast in that their economy is based on natural resources, tourism, and second homes; most cities are small; population has grown significantly over the last two decades; and they share a skeptical view of the value of planning. A mandate similar to CAMA was proposed for the twenty-four mountain counties (the Mountain Area Management Act) in 1974 but did not pass. Of the twenty-four mountain counties, only 3, or 12.5 percent, had land-use plans in 1990.<sup>7</sup> It seems reasonable to speculate that substantially fewer coastal communities (possibly only the original eight) would have land-use plans in the absence of CAMA.

The effect on land-use planning has not been limited to simply the creation of a plan. CAMA has also im-

Plan Component	North				
	California	Florida	Carolina Coast	Texas	Washington
Fact Basis	2.7	3.2	6.5	2.0	0.7
Goal Identification	2.6	3.0	3.5	1.0	0.9
Action Recommendation	3.8	8.6	16.9	3.9	1.2
Combined Score	3.0	4.9	9.0	2.3	0.9
N =	27	30	30	14	29

Note: Plan scope scores based on evaluation of the number of items and their relative quality for each of the plan components.

Table 1. Comparison of Average Plan Scope Scores for Five States

proved the quality of the plans in certain targeted issues. Table 1 compares the scope of hazard plans across the five states. The scales used for this comparison reflect the number of hazard items addressed (e.g. facts, goals, actions). North Carolina coastal plans rated the highest in each category. North Carolina coastal plans on average have twice the number of items for facts and actions as Florida, the next highest. The average plan scores for California and Florida reflect state planning mandates. Texas and Washington did not have planning mandates at the time, but Washington has since adopted one. Similar qualitative evaluations of the hazard-related components of land-use plans in the North Carolina mountains and Piedmont resemble the results from Texas and Washington where there are no mandates. As in other states with planning mandates, CAMA has had a strong impact on the scope of the adopted land-use plans. North Carolina's program appears particularly strong, at least regarding natural hazards.

Interviews revealed that without the specific hazard requirements of CAMA, many of the communities would shift their plans away from mitigation. When asked whether they would change their strategy in the absence of specific planning requirements, sixteen of the thirty North Carolina sample governments said no, primarily because they either approved of the current CAMA approach or felt there were no other options. However, eight of the thirty, or 27 percent, said they would focus less on mitigation. Four of the interviewees also indicated their regulations would definitely be less stringent without CAMA.

Although CAMA has increased the amount and scope of planning in the coastal region, its effect on the level of local support has not been as strong. Only three of the communities that did not have plans before CAMA said they would have one now if CAMA were discontinued. Thus, nearly two-thirds of the localities surveyed would probably drop the mandated planning if possible. Several of these governments indicated they would never-

theless do more to monitor and manage development as a result of CAMA. These respondents attributed the shift to the educating influence of CAMA on decision-makers, the public, and even developers.

The most common reasons cited for discontinuing planning in the absence of CAMA were lack of need, insufficient staff, and controversy. A possible explanation is that many of these communities are inland and have experienced little or no population growth. It should be noted, however, that there is no clear statistical relationship between size of hazard area, population growth and interest in continued local planning. Lack of funding and technical expertise would be significant barriers for some of the smaller communities if CAMA were no longer in place.

While most of the respondents indicated they supported or strongly supported CAMA's goals, it is clear that the mandate is still necessary to maintain the current level of planning. A gradual acceptance of the value of planning may be taking place in many of these communities, but it is not self-sustaining.

**Effects Beyond Planning**

Although CAMA's local government emphasis is on developing plans, the mandate's effects have exceeded this narrow focus. Respondents indicated that CAMA has led to stronger or more appropriate regulations and has increased political support for hazard reduction measures (Table 2).

Another result of CAMA is that more plan recommendations are implemented as development management measures. These measures can be divided into two categories, development standards (e.g. building codes) and land use measures (e.g. zoning). Table 3 shows, by state, the proportion of recommendations in land-use plans which have been implemented into actual development controls. North Carolina coastal communities have implemented, on average, 69 percent of their plans' recommendations into development standards. This average is again

higher than the other four states. This success is especially notable because North Carolina had higher numbers of plan recommendations at the start.

The North Carolina Division of Coastal Management has stressed consis-

Effect Reported	Respondents (N=30)	
	Percentage*	Number
Changed type, quality, or location of development	30.7%	(9)
Greater political acceptance of hazard reduction measures	16.7%	(5)
More stringent regulations	13.3%	(4)
Increase in public awareness	13.3%	(4)
Better technical assistance to developers	6.7%	(2)
Little or no effect	26.7%	(8)

\* Respondents could provide more than one answer

Table 2. Effect of CAMA on Local Hazards Regulations

Development Management Measures	North				
	California	Florida	Carolina Coast	Texas	Washington
Development Standards	0.47	0.62	0.69	0.42	0.18
Land Use	0.48	0.60	0.64	0.39	0.29
All Measures	0.32	0.41	0.44	0.27	0.16
N =	27	30	30	14	29

Table 3. Comparison of Average Proportion of Plan Recommendations Which Have Been Implemented in Local Development Management

tency between recommendations and development standards to encourage communities to create plans they sincerely intend to implement.<sup>8</sup> Several of the interviewees indicated that this caused problems at first because some people did not expect the plans to carry any real weight. The state expects to increase this emphasis on consistency in the future. This should increase the effectiveness of the plan-making process.

### Directions for the Future

During the interviews, local officials were asked to identify changes that they felt should be made to CAMA, particularly its land-use planning requirements. Although most of the respondents indicated general satisfaction with CAMA requirements, several issues arose. First, many felt that the planning requirements should be made more flexible to allow local governments to structure plans to their own needs rather than following a prescribed pattern. Several respondents indicated that the structure required by CAMA limited the usefulness and application of the plans. One locality convinced state reviewers to allow a different format after it created a cross-index to the state format. While this flexibility will allow localities better plan formats, it might also make it more difficult to compare plans with adjoining localities.

Localities also requested less stringent regulations or even the complete removal of requirements. To some extent this reflects a desire to avoid regulation in the very areas CAMA addresses. Change is therefore unlikely. It may be reasonable, however, to consider removing some communities, such as cities located far inland, from the CAMA program.

Several of the officials recommended increased coordination in the planning process between local govern-

ment, adjacent jurisdictions and state agencies. As mentioned earlier, the Division of Coastal Management intends to put more emphasis on consistency in planning. It is likely this will promote consistency not only within a jurisdiction but also with local governments and state agencies.

### Conclusion

In the years since the adoption of CAMA, the amount and scope of local land-use planning on the North Carolina coast has increased significantly. CAMA has allowed communities to overcome financial constraints on and local opposition to planning. Although many communities still believe that the planning has little value, it appears that a slow change is taking place. In some communities CAMA has served as an educational program while enforcing state standards.

CAMA has notably improved the quality of policies regarding natural hazards. Natural hazards are often a low priority, even in communities where the risk is reasonably clear and serious. CAMA requirements have motivated communities to protect themselves. CAMA's planning mandate has gone beyond just producing more planning. It has shown the value that planning can create. CP

### Notes

- <sup>1</sup> Brower, David J. and Daniel S. Carol. *Coastal Zone Management as Land Planning*, Washington, D.C.: National Planning Association, 1984, pp. 3-4.
- <sup>2</sup> Ibid., pp. 4-6.
- <sup>3</sup> DeGrove, John. 1983. "North Carolina: Combining the Local and State Roles," *Land, Growth, and Politics*. Chicago: Planners Press. pp. 335-350.
- <sup>4</sup> Owens, David W. 1985. "Coastal Management in North Carolina: Building a Regional Consensus." *Journal of the American Planning Association*, Summer 1985, p.322-32.
- <sup>5</sup> Interview with Roger Schechter, Director, and Rich Shaw, Assistant Director of the North Carolina Division of Coastal Management, September 17, 1991.
- <sup>6</sup> Ibid.
- <sup>7</sup> McLaughlin, Mike. December 1990. "Preserving the North Carolina Mountains: Time to Develop a Plan?" *North Carolina Insight*, p. 10.
- <sup>8</sup> Interview with Schechter and Shaw.