

# Aurora: Planning For A Small North Carolina Coastal Town

*My first trip to Aurora, North Carolina was on an early fall day in 1974. I was travelling with other graduate students and faculty from the School of Design, North Carolina State University. Aurora's Mayor and Town Board had recently requested technical assistance from the School for the purpose of helping to solve some of the problems the Town faced. Randy Hester, Associate Professor at the School had decided to take this project on as a case study in his landscape architecture studio-workshop. The purpose of this one-day trip was to allow those graduate students who had selected this studio-workshop an opportunity to become acquainted with Aurora. For me, that initial visit, began an association with the Town that lasted three years. This article describes the planning process as it was developed and used in Aurora, along with an admittedly subjective analysis of some things learned as a result of doing planning and community development work in a small coastal community.*

Aurora, North Carolina is a small rural town located in the central coastal county of Beaufort. It was incorporated in 1880 and served for many decades as a supply and market center for the surrounding farming community. In 1970 its population was 620.

During the 1960s and the early 1970s, elected officials in Aurora witnessed changes in their small town and surrounding region which concerned them. A massive deposit of phosphate, an ore used in the manufacture of fertilizer and other products, was discovered in the area during the 1950s. Believed to be one of the largest deposits of phosphate in the world, it lies beneath the land surface and water bodies at a depth ranging from 40 to 230 feet below mean sea level. During the early 1960s Texas Gulf Sulfer, later to become TexasGulf, Inc. (TG), began drilling test wells to determine if the deposit was of sufficient thickness and quality to justify the cost of extracting the phosphate ore.

Demand for phosphate was increasing at this time, especially for use in the production of fertilizer. This market trend, combined with the discovery that the deposit was of a high quality, made the prospect of a surface mining operation near Aurora very likely.

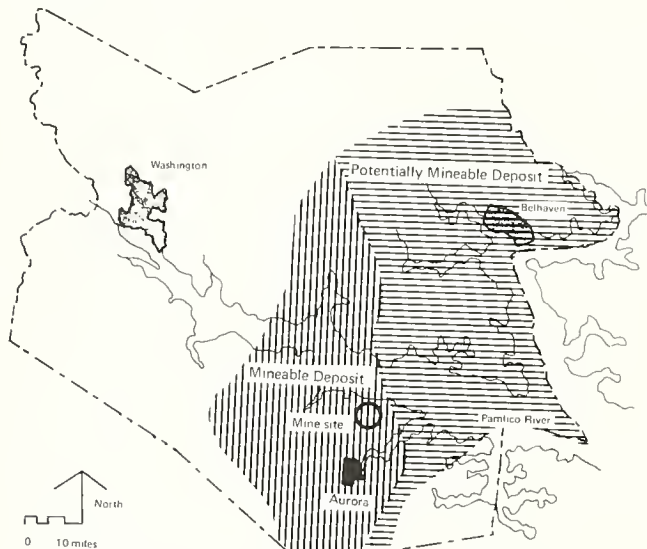
Before the company could begin its mining activities, a small creek and land adjacent to the initial mining site about seven miles northwest of Aurora had to be substantially altered to create a barge canal. After processing, the phosphate ore was going to be shipped by barge and rail. Although this took place before present environmental impact legislation was enacted, a public hearing was required before dredging work would begin to suspend the water quality classification that had been assigned to Lee Creek by the State. The transcript of that public hearing provides clear evidence that both local and state officials were strongly in favor of the proposed TG operation primarily because of the anticipated economic benefit for Aurora and the area (North Carolina Board of Water and Air Resources, 1963). People were expecting new jobs and increased business activity for local firms. The declassification was approved, and the company began to construct its facilities. Full-scale surface mining began in 1964.

After the operation had been going for a few years, it became apparent to many townspeople that the economic growth benefits were falling short of expectations. Some of these expectations were probably unrealistic given that the mining operation was a capital-intensive activity. However, feelings of discontent and skepticism began to replace

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the earlier optimism. These concerns were reinforced by the generally poor relationship between TexasGulf and the town government at this time. Attitudes were mixed among townspeople. Even though Aurora had now grown as much or as rapidly as expected, local people were being hired by the company, making it possible for them to remain in the area rather than going elsewhere to seek employment. So, TexasGulf and shift-work became a part of Aurora's lifestyle, but concerns about the Town's future remained.



The phosphate deposit in Beaufort County.  
Source: School of Design, 1976

In 1974, another phosphate mining company, North Carolina Phosphate Corporation (NCPC), announced its intention to begin the extraction of phosphate ore from a site about 1 1/2 miles directly north of town. Once again many townspeople reacted to this proposed new mining operation with mixed feelings. Many were worried because it would be much closer to town than the existing TG operation. But, similar to the TG operation, the new facility would be providing jobs, and hopefully a boost to the local economy. Unlike the first time, however, town leaders were not willing to make assumptions about the balance of benefits and costs to Aurora. They believed that the new operation had potential for both positive and negative impacts and they wanted the opportunity to understand these impacts. Very simply, town leaders believed that given this information impacts could be modified so that Aurora's future would at least be secure, if not enhanced.

It was at this time (1974) that town leaders, with assistance from the regional council of governments, contacted the School of Design at North Carolina State University. Some of the architecture and landscape architecture studios at the School were being conducted as workshops with students and faculty working together on real projects. Aurora provided

an excellent focus for such a workshop. The Aurora studio-workshop began in the summer and fall of 1974 under the direction of Associate Professor Randy Hester and graduate student Donna Palmer.

## THE PROCESS

The first task for the Aurora workshop was to develop a comprehensive strategy to guide data gathering and analysis. Aurora, like other North Carolina coastal towns and counties in 1974, was under legislative mandate to prepare a land use plan according to Coastal Area Management Act (CAMA) guidelines. Preparation of this plan was, at least at first, our primary objective. The CAMA guidelines and regulations necessarily became an important element in developing the planning process. However, following CAMA guidelines became somewhat of a frustrating exercise due to the many revisions that took place during that first year, providing evidence that North Carolina's coastal area planning process was in its early stages and still evolving.

It was decided that data gathering should proceed along two parallel tracks, socio-economic analysis and natural environmental analysis. Stated another way: the impacts of change on *people* and the impacts of change on *land*. Each student took responsibility for specific tasks within these two broad categories according to their interest and educational background. There was a considerable amount of experimentation with information gathering techniques and ideas. Many approaches were tried, sometimes they were modified before being used, and often they were abandoned in favor of entirely new methods. The Aurora planning process, in fact, emerged out of these experiences.

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"AURORA...WAS UNDER LEGISLATIVE MANDATE TO PREPARE A LAND USE PLAN ACCORDING TO THE COASTAL AREA MANAGEMENT ACT (CAMA) GUIDELINES."

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Within the socio-economic element of the process the major objective was to discover the needs and concerns of Aurora's present and future citizens. The phosphate mining industry would be attracting new employees to the region. It was important to know what these people would be looking for in a community that would cause them to settle there. This information would be of value in planning an Aurora that would provide the identified needs of this population group. To accomplish this, a questionnaire was administered to a sample cross-section of TG employees. They were asked questions about their shopping, recreational behavior, and

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housing-type preferences, among other questions geared toward producing a socio-economic profile of this group (School of Design, Technical Report One 1975).

Aurora's present population received the greater amount of attention and analysis. For this purpose, another questionnaire was developed by the planning team and administered with the assistance of the Junior Women's Club to nearly half of all households in the town. Some of the questions were similar to ones on the TG survey but others were related specifically to Aurora and its problems and prospects. The responses to many of the questions were interesting and provided good insight into some of the attitudes held by Aurora's citizens. Most people surveyed agreed to limitations on town growth, and answered no to a question asking if they would be willing to sell and move from Aurora. About the same time in the process one student decided to spend some time working the local school system in an effort to find out about the attitudes of Aurora's young people. A technique called 'wish poems' was used to help the students articulate the problems and issues they perceived. Typical of the responses was a desire for Aurora to retain its small town atmosphere, coupled with an awareness of its evolving character. The issues students cited were incorporated into a video presentation at a public meeting, and proved extremely successful in pinpointing the townspeople's sentiments.

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**"WORKING WITH THE PLANNING TEAM, THE TOWN BOARD AND PLANNING BOARD DEVELOPED A SERIES OF GOALS AND OBJECTIVES FOR AURORA."**

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The results of these surveys along with other information were studied carefully by the planning team and local officials. Working with the planning team, the Town Board and Planning Board developed a series of goals and objectives for Aurora. The goals covered a fairly broad range of concerns and were supplemented by more specific objectives. These goals and objectives along with the survey results were published as *Technical Report Three, Goals for Aurora* and distributed to every household in town (School of Design, 1975). Much of what was contained in this goals report was not new to many Aurora citizens. But, for the first time these concerns, needs, and hopes had been made explicit and therefore provided a public focus of attention for the planning and community development effort.

Additional research conducted within the socio-economic element of the process included a study of Aurora's history, its employment and economic characteristics, community facilities, and recreation needs (School of

Design, Technical Report Two 1975).

The CAMA guidelines provided a framework to guide the natural environmental element of the data gathering process. This framework called for the analysis of constraints on land use, including physical limitations, fragile areas, and areas with resource potential. To accomplish this for Aurora meant bringing together information from diverse sources such as a soil survey completed in 1917, a more recent but incomplete soil

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**"...CONSIDERABLE ATTENTION WAS GIVEN TO SOIL CONDITIONS AND TO SURFACE AND SUBSURFACE WATER SYSTEMS."**

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survey, aerial photography, previous research, and extensive fieldwork. There was very little compatibility between these sources and our information needs or those specified by CAMA. We had to review, analyze and confirm these original sources. The information then had to be translated into a unified format that was comprehensive and could be used to produce a land use plan.

During this phase of the data gathering and analysis considerable attention was given to soil conditions and to surface and subsurface water systems. Both of these natural environmental systems had played significant roles in Aurora's past and they were clearly going to continue to exert an influence in the future. Soils in the Aurora region were found to be fertile for agricultural purposes in spite of the high water table. This condition required that fields have drainage canals to remove excess water. Most farms in the area rotated their crop production between soybeans and corn.

Changes in the regional and local hydrology caused by the mining operation were a major source of concern. Much of this region is underlain by a wedge of sedimentary rock which contains an aquifer system known as the Castle Hayne formation. This aquifer is the principal water supply source in the area for individual wells and municipalities. When the mining operations began at Lee Creek it was necessary to continually pump water out of the pit so that excavation activities could take place under dry conditions. This pumping created a depressed water table throughout the area's subsurface water system, resulting in problems with water availability in many local wells. A large number of wells eventually had to be dug deeper to compensate for this drawdown of the subsurface water level. TG provided financial assistance to individuals for some of this work if the company was sure that the problem with a particular well was directly related to the mining activity. However, many believed that TG did not do



In 1979 the Town purchased land on South Creek for use as a public marina. Photo by Brian Benson

enough to correct this problem.

Work on the preparation of the land use plan became more intensive during the summer of 1975. Aurora and the School of Design had received a technical assistance grant from the Coastal Plains Regional Commission which allowed the work to begin on a full-time basis. It was at this time that Hester, Palmer and myself moved to Aurora for the summer in order to complete the land use plan. Actually living in Aurora, rather than making occasional field trips, created a much more productive work atmosphere. There was more time to spend checking field data, both socio-economic and natural environmental. An even more valuable outcome of that summer were the friendships we developed with many townspeople. Our previous status as "students from Raleigh" began fading. Workspace was set up in a backroom at Town Hall that had served at one time as the town's fire station. This convenient location allowed citizens to come by, see what we were doing and ask questions.

As Aurora's Land Use Plan began to take shape problems were encountered with the use of a single rural land classification as described in CAMA Guidelines (Coastal Resources Commission, 1975). A more refined approach to the classification of rural lands was needed in Aurora. By studying the existing land use patterns and intrinsic suitability in the planning area we were able to distinguish three types of rural land. *Rural One* was land suited for hardwood forest, that provided excellent

wildlife habitats and needed to be protected for those uses. *Rural Two* included land that was in productive agricultural or forestry use and also needed to be protected to ensure that cultivation could continue as the primary use. *Rural Three* was land that, because of its location, and other characteristics, had good potential for mining. This rural land classification scheme became a basic element of the Land Use Plan. Public attention was directed toward the mining-related aspects of the Plan such as the rural land classification system. But Aurora also had other problems. A substantial amount of the planning and analysis effort became oriented toward in-town problems such as poor housing conditions in some neighborhoods; inadequate health care and facilities; deterioration of the main street business district; lack of water and sewer lines in some neighborhoods; and the need for a community multi-purpose center.

In general, the Aurora Land Use Plan sought to balance the interest of phosphate mining and the goals and objectives of Aurora within the constraints of the coastal environment. The Plan was adopted by the Town Board upon recommendation of the Planning Board in the fall of 1975. After adoption, work began on projects that could implement the Plan.

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"A SUBSTANTIAL AMOUNT OF THE PLANNING AND ANALYSIS EFFORT BECAME ORIENTED TOWARD IN-TOWN PROBLEMS..."

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#### IMPLEMENTATION EFFORTS

In the fall of 1976, Aurora received word from the Department of Housing and Urban Development that its application for a Community Development Block Grant had been approved. This \$420,000 grant would provide the initial financial resources needed to begin implementation in several areas that had been identified by the Land Use Plan and Goals. This was an important event for Aurora because it allowed the interest which had evolved during the planning process to focus on projects that would significantly contribute to achieving several of the stated goals and objectives.

#### COMMUNITY DEVELOPMENT PROGRAM

The Aurora Community Development Program was formed in September, 1976 and I was hired as its Director. The tasks were clear and followed directly from the adopted Plan: rehabilitate houses, pave roads, lay water and sewer lines in two target neighborhoods; acquire a large old house and its two-acre lot for use as a multi-purpose building; and financially

assist the construction of a local primary health care center. A citizens advisory group made up primarily of citizens from the two target areas was appointed by the Town Board. This group of eleven people served, in effect, as a 'local guide' through the intricate pattern of local and neighborhood politics and characteristics. A federally-funded community development program was a new and unknown entity to residents in Aurora's target neighborhoods. People were of course pleased that the program had been funded but they were also

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somewhat apprehensive and skeptical about its implementation. Many, especially target neighborhood residents took a 'wait-and-see' attitude. Not until the first sounds of hammer and saw were heard did they believe it was really going to happen. Some apprehension by local people was also evident largely because the funding source was federal, thus creating the inevitable regulations, assurances and similar requirements that were unfamiliar and often viewed as confusing. However, on balance, Aurora citizens saw this as an opportunity to solve some of their problems and realize several planning objectives. Additional funding from HUD has allowed the Community Development Program to continue.

#### THE ZONING ORDINANCE

Another major element in the implementation of the Land Use Plan was the zoning ordinance that would enforce the Plan. Preparation of the zoning ordinance also began in 1976 and carried over into 1977 with funding from a CAMA implementation grant provided by the National Oceanic and Atmospheric Administration. A consultant, Robert M. Leary and Associates, was hired to assist in key aspects of this work. Specifically, the firm was to prepare the section of the ordinance establishing performance standards and permit processes for surface mining and other significant land uses. Since Aurora's CAMA Land Use Plan had already been prepared and adopted by the Town Board, it served as the basis for the preparation and application of the zoning ordinance. During this time the mining companies became concerned about the proposed regulatory treatment of surface mining in the Town's extraterritorial planning jurisdiction. The Aurora Planning Board began a review of each section of the new ordinance as drafts were completed. Mining company officials became a familiar sight at Town Hall and the Planning Office requesting copies of the minutes of these meetings. In



*The first house to be repaired under Aurora's CDBG program. Photo by Brian Benson*

a statement read at the public hearing, mining company officials described the ordinance as placing phosphate mining in a "negative light" and as an "undesirable use of the land" (*The Sun Journal*, February 27, 1977). Contrary to popular opinion at the time, the ordinance was designed *not* to prohibit surface mining in the Town's planning jurisdiction but rather to place certain performance standards on its operations. Standards were developed for noise, glare, and vibration. Additional standards were developed for the land reclamation process that followed the excavation activities. Although the State places certain reclamation requirements on surface mining, the planners believed it was important for the Town to set and enforce its own standards.

The Aurora Zoning Ordinance also created a Downtown Area Development District to help encourage the revitalization of the Main Street business district. A Conservation District was applied to the fragile coastal environments that had been identified in the Plan.

On February 23, 1977 the Aurora Town Board adopted the new zoning ordinance-- it has remained in effect since that date.

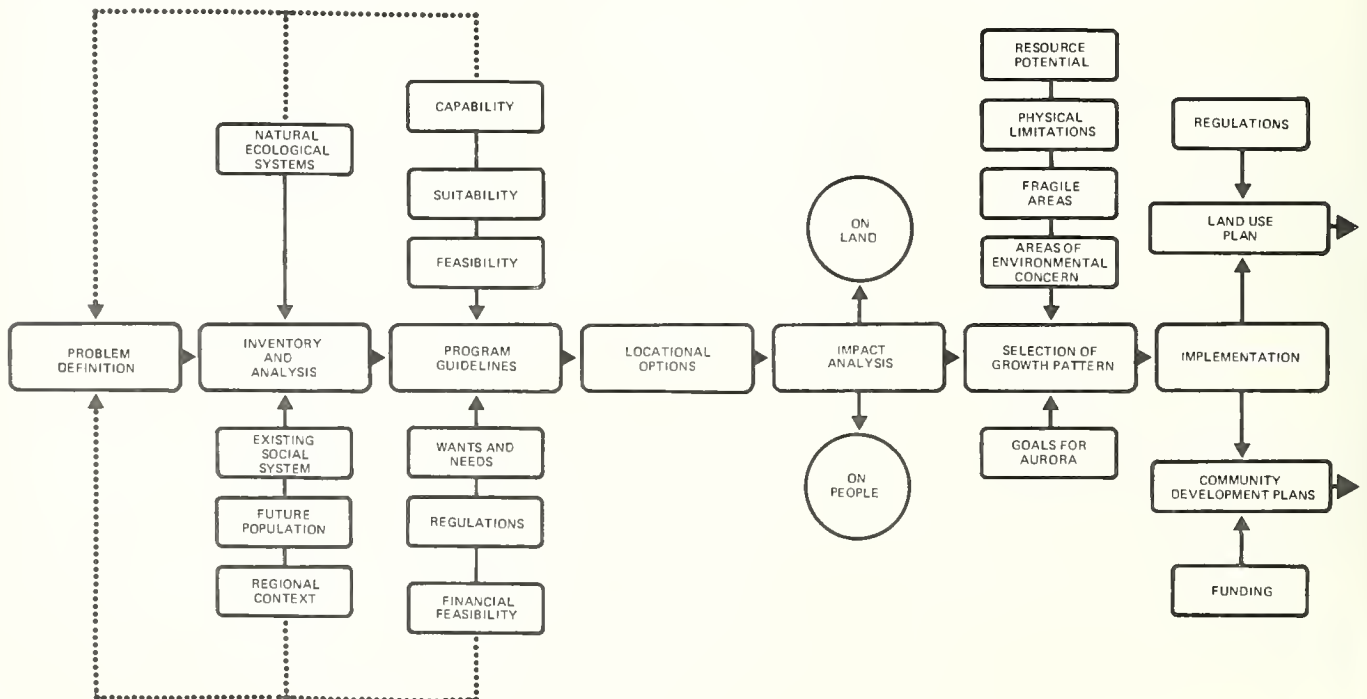
#### LEARNING FROM AURORA

The Aurora planning and community development process, in addition to helping the Town establish and meet several goals, also yielded benefits for those individuals involved. There was a certain hopefulness about working in Aurora that things could change in visible and substantial ways and that progress could be

made in ways that mattered to townspeople. As a result, the planning team came away with many vivid impressions about planning for a small town. Many of my impressions have been reinforced and refined somewhat by experience elsewhere. The following can only be described as impressions however, and not techniques, although some may suggest certain approaches to solving problems in a small community:

1. *Active leadership* There appears to be no substitute for strong, active leadership. The community benefits when its elected leaders are willing to find out about problems, review alternative solutions and then seek out resources to implement solutions. This obviously rational process is, in fact, not a simple task. Problems facing small communities are often highly emotional and political. Such issues include poor housing conditions, inadequate health care, discrimination, a local economy based on a single industry and others. Many communities when faced with such problems tend to avoid them because of anticipated controversy. Others like Aurora, which are fortunate to have good leadership, work to solve problems rather than avoid them. It is within this type of local political atmosphere that planning and community development can be most effective.
2. *Sensitivity to the local social environment* It is important to develop an appreciation of the social and political environment,

*The Aurora planning and community development process. Source: School of Design, 1976*



within which local attitudes are formed, that goes beyond statistical analysis. The problem is that the local social framework and the decision-making process that emerges, is difficult, if not impossible to fully understand in a traditional analytical way. It defies flowcharting or quantitative analysis probably because the local decision-making process is not highly structured. Rather, it is non-sequential, amorphous, subjective and constantly changing. However, it is important not to dismiss this existing process because it lacks structure -- it is critically important to the success of planning and community development. The primary task of planning in this area is to patiently begin introducing more rational and thorough decision-making strategies into the local process.

3. *Maintaining a clear vision* A complement to the need for an appreciation of the local social framework is a need to maintain a clear vision of the planning and community development objectives being sought. In an effort to design plans that are sensitive to local characteristics it is possible to become so involved in local conditions that objectivity is obscured. This means that the goals, objectives and policies must remain a vital part of the decision-making process. Keeping key elements in the planning process visible to the public tends to direct events along the desired path.
4. *Setting goals and objectives* In Aurora, setting goals and objectives had the effect of clarifying problems and needs,

thereby allowing public attention and effort to concentrate on identified courses of action. This encourages more creative problem-solving as an alternative to relying on traditional solutions.

5. *Need for clear information* Information presented to local decision-makers and others should be free of jargon and obscure language. Smalltowners though sometimes not sophisticated, can detect sloppy and disorganized thinking even if it is cloaked in technical sounding rhetoric. The approach to this situation is to avoid generalities and get to specifics about that place while emphasizing the results of good planning.
6. *Making the connections between policies, decisions and implementation* One key problem encountered when trying to implement planning is that local decision-makers do not always make the connection between stated policies and specific land use, zoning, or other related decisions. Their attention is focused on the individual case level, and not on the broad goal or more detailed policy. If the connection is made, it is often tenuous and highly dependent on the specific case. This situation is not necessarily bad and could very well lead to a more appropriate decision that balances unique circumstances against stated policy. Small town residents and leaders tend to frame land use issues and problems in terms of personalities rather than conflicting values or official policy. Therefore, it is important to keep the spirit of the goal or policy alive in the decision-making process as specific situations arise. The effect is that decisions have to be made and issues addressed that might otherwise go without official attention.
7. *Data gathering* In Aurora the data-gathering process proved to be a valuable learning experience which went beyond the information compiled. The acts of sifting through previous research, old maps, analyzing survey data, conducting surveys, and doing fieldwork contribute to the understanding of a town and its people.

## CONCLUSIONS

Most traditional planning methods seek to separate issues, problems and their various components for the sake of understanding. This is, of course, an important part of the planning process necessary for accurate understanding. To a large extent however, we found that this analytical process is countered by the tendency for these issues and problems to pull themselves

back together. Planning issues and problems exist in an on-the-ground context and they exist in relation to other problems and issues. We believe that those who want to understand small towns in a comprehensive way must be able to modify preconceptions about the structure and nature of a place as a result of observation, study and thoughtful reflection. The characteristics that emerge must coincide with reality if planning is to be successful.

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