

**Charleston  
Harbor**  
Special Area  
Management  
Plan





# Charleston Harbor

## Special Area Management Plan

*Prepared by*  
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## Foreword

*As with any major planning effort, this management plan represents the work of a great many people. What sets the Charleston Harbor Project (CHP) Special Area Management Plan apart, at least in the realm of federally funded projects, is that the impetus and the direction came from the local community. NOAA is to be commended for allowing the local resource managers, local researchers, and local citizens to set the tone and make the decisions on the direction this project should take.*

*Critical to focusing state and local efforts and seeking assistance from the appropriate federal programs, were Senator Fritz Hollings and his staff. Senator Hollings, well known for his support of vital coastal zone management programs and environmental protection, provided guidance and introduction to the federal programs with mandates to support management of estuarine resources. Along with other members of Congress, his past support of the Sea Grant program and other water resources programs that build significant local research teams in South Carolina universities and elsewhere, and his support of NOAA and other agencies to pursue special area management plans and estuarine studies provided the vital expertise and funding to undertake the Charleston Harbor Project.*

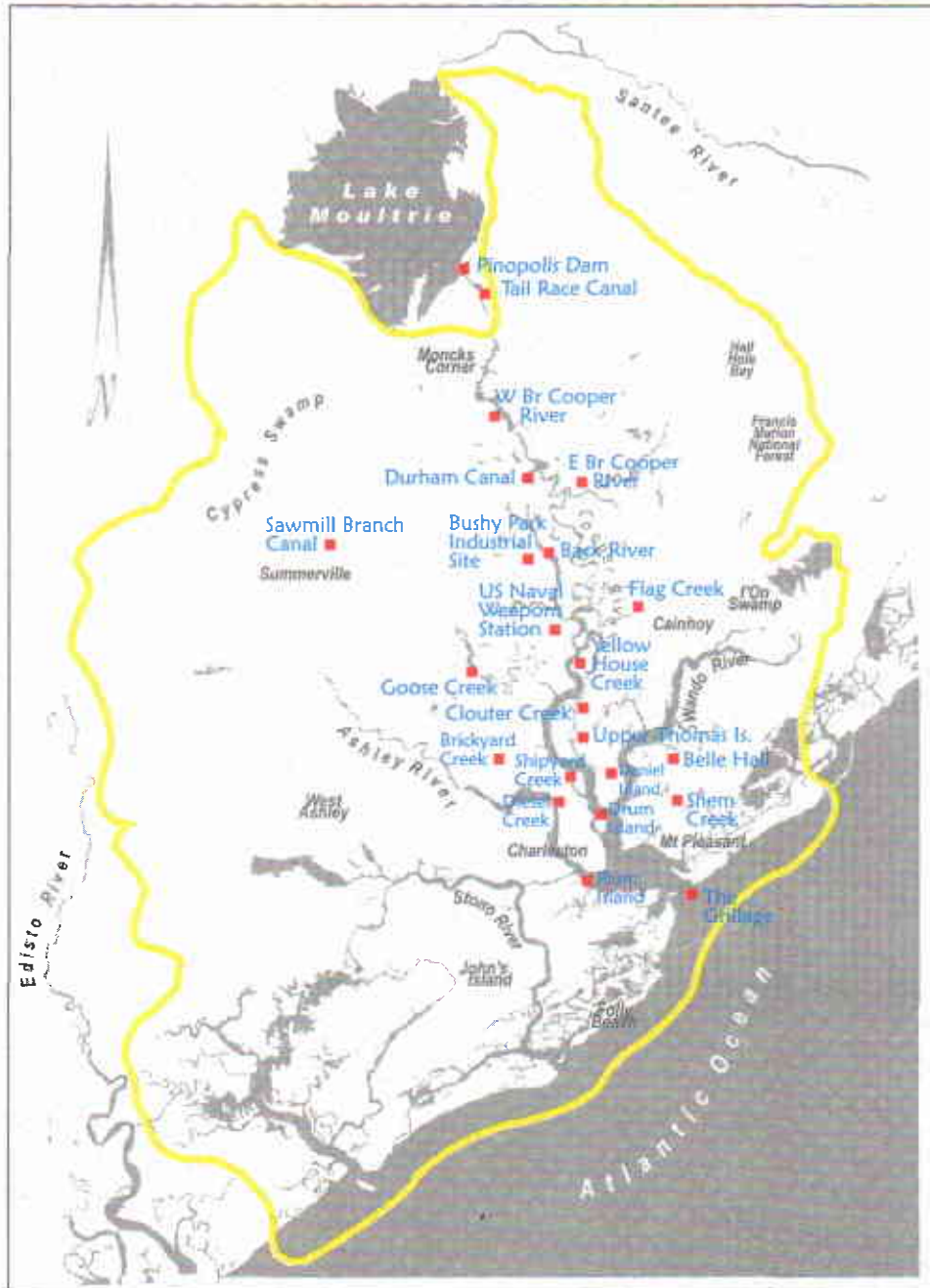
*Seeing that these vital federal and state resources were effectively and efficiently directed was a strong suit of the Charleston Harbor Project. Heyward Robinson, who shepherded the Project nearly from inception to the final stages, did so with vision and exceptional leadership. We were fortunate to have someone with the hands-on regulatory background necessary to understand the management needs and the technical background to be able to direct the research. This is a unique blend, and Heyward consistently showed his mastery of the issues and used his unusual vantage point to bring a complicated project to successful conclusion.*

*The CHP was complicated because a new locally led approach was necessary, the magnitude of the problem was extensive, and interdisciplinary investigative teams were needed to efficiently focus the funds available onto common objectives. We appreciate the adaptation that local, state, and federal agencies underwent to support the local vision for investigating Charleston Harbor. Resource degradation of estuaries has rarely been addressed early enough because mandates for air, water, and land protection and preservation are constitutionally and legislatively split between different levels of government and many different agencies. The dominance of urban land uses in the local contributing watersheds affects almost each drop of water flowing through the Harbor. The only effective means to understanding the degradation of Charleston Harbor and relate the degradation to the causes was to employ nationally recognized teams of interdisciplinary experts to evaluate the resources and trends in water quality.*

*Earlier attempts to protect the environment have been successful. Because of the Clean Water Act, Charleston Harbor is cleaner than thirty years ago. The Clean Air Act has had the same effect on air quality. But the sheer volume of the changes that are occurring begin to overwhelm these single-issue regulatory programs. The Coastal Zone Management Act is largely designed to weave these various programs together for the overall protection of coastal resources. Unfortunately, this approach has seldom been used because it is difficult to develop a system to address the cumulative impacts of hundreds of decisions that affect the environment.*

*The lack of information about how the ecosystem works is the main stumbling block to developing protective measures. Recognizing this, the CHP assembled a number of experts and gave them the tasks of finding and filling gaps in our knowledge of resource status and protection. The process of watching very competent people uncover relevant questions and explore possible answers was an inspiration. They performed their tasks admirably. Unfortunately, they cannot all be listed in this report, but a brief summary of all their research is given in the appendix.*

*All of us who worked on the CHP are proud to have been a part of this effort. The problem has been laid out and a plan designed. It is now up to each of us to insure our natural and cultural heritage is protected.*



Referenced Sites Within the Charleston Harbor Project Study Area



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## Origin and Purpose

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The Charleston Harbor Project (CHP) evolved from a grass-roots effort to plan for the rapid urban growth projected for Charleston, Berkeley, and Dorchester counties. With the completion of the Mark Clark Expressway, large tracts of previously inaccessible land became available for development. Knowing that unplanned industrial and urban development could rapidly overwhelm a region's watershed resources, local leaders realized patterns of growth in other coastal communities could provide lessons for Charleston. These communities, similar in character to Charleston, had developed too quickly without an appreciation of the environmental consequences, resulting in the degradation of their watersheds and deterioration of their overall quality of life. In 1989, a volunteer citizens group, the Charleston Harbor Estuary Committee, united in an effort to encourage planning to manage the projected growth. Their objective: *to protect the unique, high quality of life in the Charleston area from the inadvertent resource degradation experienced by many urban coastal communities.* With help from The South Carolina Sea Grant Consortium, a series of educational seminars were held and position papers were designed to obtain federal funding for the preparation of a comprehensive management plan. As a result of these efforts, Department of Health and Environmental Control (DHEC) and Environmental Protection Agency (EPA) worked to have Charleston Harbor designated a part of the National Estuary Program. In 1991 it was finally decided the best way to proceed was for the Office of Ocean and Coastal Resource Management of the National Oceanic and Atmospheric Administration (NOAA) to provide funding for a Special Area Management Plan (SAMP) through the CHP. The objective of the SAMP is to provide guidelines for growth that will protect the natural and cultural resources of the area, strengthen the area's diverse economic resources, and provide managers and leaders with the information necessary to manage and direct this growth. The ultimate goal is *to sustain the rich economic, cultural, and natural resources of the Charleston Harbor Estuary.*

An initial grant in 1991 allowed for preliminary planning and a review of available information pertinent to the Charleston Harbor Estuary. These actions revealed that no serious ecological or water quality problems were present in the estuary and that toxic pollutants were not a widespread problem. Based on these findings, NOAA set the mission of the Charleston Harbor Project: *to conduct resource management oriented research and develop policies that would protect the balance between economic, cultural, and natural resources of the area for the next twenty years.* To accomplish this, funding of \$5,642,500 for the next five years was provided to develop the management plan.

The CHP is administered through the Office of Ocean and Coastal Resource Management (OCRM) of DHEC. Section IV (F) of the South Carolina Coastal Zone Management Plan provides for the development of Special Area Management Plans when conflicts of uses are widespread and these conflicts threaten coastal resources. The "Goals and Objectives" of the CHP were developed by twelve topical task forces consisting of representatives of federal, state, and local governments, industry, the private sector, and interested citizens. These were adopted during the first year of the program and are in effect today:

*The objective of the SAMP is to provide guidelines for growth that will protect the natural and cultural resources, and provide managers and leaders with the information necessary to manage and direct this growth.*



**(1) To maintain and enhance the quality of the environment in the Charleston Harbor estuarine system.**

**(2) To maintain the range of uses of waters and natural resources of the system.**

**(3) To anticipate and address potential problems before adverse impacts occur.**

*Rapid urbanization of the watershed with the consequent nutrient enrichment of the estuary is seen as the most probable cause of future degradation of the Charleston Harbor Estuary.*

As these objectives indicate, preservation of the natural resources and maintenance of the quality of the environment for the Charleston Harbor region are supported by an approach to anticipate and address potential problems before they occur.

Rapid urbanization of the watershed with the consequent nutrient enrichment of the estuary is seen as the most probable cause of future degradation of the Charleston Harbor Estuary. Because land use is a vital issue in the future degradation of Charleston Harbor, this Project finds that a local, state, and federal government partnership with industry and the public must continue and focus on gaps between single purpose regulatory programs. Comprehensive coastal zone management requires that minimum requirements of air, water, solid waste, and land use laws be continually examined and upgraded where necessary to protect the unique cultural, natural, and economic resources of the Charleston area.

To achieve the objectives of the CHP the following six vital topics were investigated: (1) stormwater and point and nonpoint source inputs; (2) biological resources; (3) dredged material disposal; (4) land use and population growth; (5) public access and its utilization; and (6) data management and retrieval. Within this framework, sixty-two applied research studies were planned and conducted over a five-year period. These studies were designed to fill the gaps in the current state of knowledge and, thus, effectively complete the overview of Charleston Harbor resources. This body of research establishes a framework of information sufficient for long-term planning and the management of the Charleston Harbor Estuary at the watershed level. It also provides a basis for the methodical management of the estuary in an ecologically meaningful way. Managers can readily focus their activities where they are most needed by identifying areas for protection, research, restoration, and mitigation. Management of the Charleston Harbor Estuary at the watershed level enables managers to make individual decisions in the context of all of the region's resources. This large-scale view will make the permitting process more predictable and flexible for the business community, while providing the public with better resource management and protection.



*The Counties of South Carolina and the Boundary of the Charleston Harbor Project*

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## CHP Organization

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The CHP was organized into four levels: task forces, focus groups, the Management Committee, and the Administrative Board. The Policy Steering Committee and the Oversight Committee were also created to assist in the implementation of the CHP. The South Carolina Board of Health and Environmental Control has oversight over all actions of OCRM and the CHP. The purpose of each group is described below.

### Task Forces

In order to involve as many different viewpoints as possible and have public participation in the Charleston Harbor Project, twelve task forces were organized. Over 200 individuals participated on the task forces, representing the private sector, concerned citizens, and federal, state, and local jurisdictions. They identified research needs and developed investigative proposals within their focus areas. The twelve task forces were organized around the following resource management topics:

Biological Resources	Marina
Cultural Resources	Point Source
Data & GIS	Public Involvement
Dredge/Spoil Disposal	Recreation
Economic	Storm Water
Land Use	Water Quality Modeling

*Over 200 individuals participated on the task forces, representing the private sector, concerned citizens, and federal, state, and local jurisdictions.*

Each research project was associated with one of the task force groups. However, this division was too narrow in scope to efficiently formulate a comprehensive plan. Therefore, all Charleston Harbor Project research was grouped into three larger categories: water, biological resources, and urban growth. Water Resources Management, Biological Resources Management, and Growth Management were the corresponding focus groups established to analyze data and make management recommendations.

### Focus Groups

The focus groups were composed of researchers, task force members, and local, state, and federal experts in each field. Each group formed its own recommendations, based on completed research, which were then synthesized into one set of recommendations by the focus group leaders, policy makers, managers, and other officials. This set of recommendations was presented to the Charleston Harbor Project Management Committee for refinement and approval.

### Policy Steering Committee

The Policy Steering Committee was formed to develop initial policy recommendations for the Charleston Harbor Project management plan for the watershed. The Policy Steering Committee was composed of representative stakeholders in the project, from federal, state, county, and municipal governments to industrial and urban development interests in the private sector. The group worked closely throughout the 1997 summer with the CHP focus group leaders and CHP researchers to review research findings and develop policy recommendations, with the ultimate goal of submitting the proposed policy recommendations to the task forces and the Management Committee for review.

