THE BEAUFORT SAMP

A Special Area Management Plan To Restore and Protect the Waterways of Beaufort County

Publication of SCDHEC/OCRM **September 2000**

Note from the Program Director:

As a former regulator, I think it is important that this special area management plan (SAMP) produce results that are useful in managing our rapid growth on the South Carolina coast. I am pleased that the work tasks outlined for this SAMP will all result in practical tools which will be helpful to this end. In that same vein, we are producing this newsletter to keep everyone informed of the progress of the SAMP while at the same time reducing the number and frequency of meetings.

We will produce a newsletter every four months, and each will contain an update on the program focus areas which are explained later in this first edition. Although this first edition is rather long, it is our goal to keep these short and to the point. If you have any questions or comments about the conduct of the Beaufort SAMP, or the newsletter, please contact Stephen Cofer-Shabica, Program Manager, at 843-856-9405 or shabcof@viperlink.net.

Steve Moore
OCRM Director of Planning

THE BEAUFORT COUNTY SPECIAL AREA MANAGEMENT PLAN

The primary objective of the Beaufort County SAMP is the protection of water quality in Beaufort County. Begun in May 1999 with funding from the National Oceanic and Atmospheric Administration, the SAMP will span thirty months. This program is designed to produce a comprehensive and effective management plan that addresses stormwater and other sources polluting the waters of Beaufort County and to identify the necessary actions to prevent further degradation of county waters.

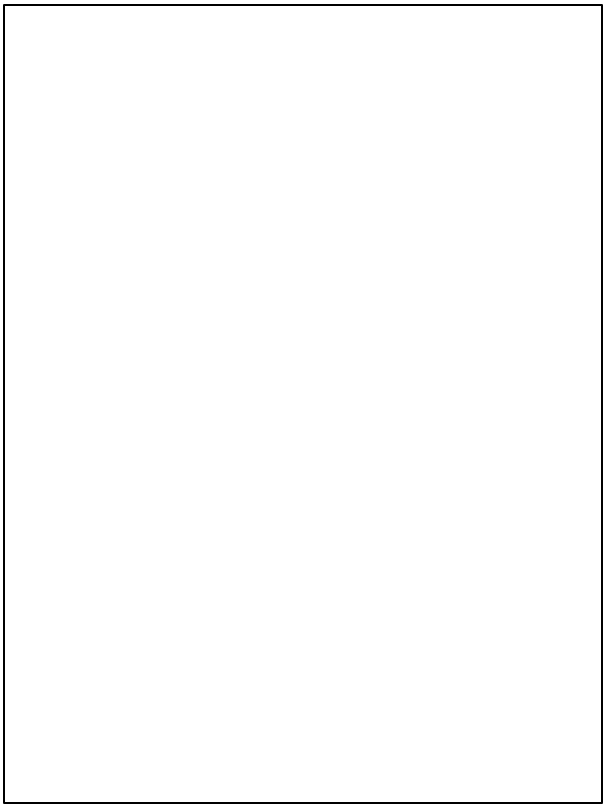
Beaufort County includes many islands, rivers and creeks, and a variety of habitats that encompass 691 square miles of which 113 are water. The 1990 population per square mile of land area was approximately 149; the year 2000 population is estimated to be 224. In the fall of 1995, 500 acres of shellfish waters in southern Beaufort County were closed to shell fishing because of high fecal coliform counts. This small number was added to the approximately 31,000 acres already closed in the county. However, small as the 500 acres were, a group of Beaufort County citizens, now the Clean Water Task Force (CWTF), took this news as a call to action. These citizens felt that if the county's shellfish resources were in trouble, that more resources were or soon would be in jeopardy. Beaufort County will develop at an unprecedented rate. It is predicted that the county's population will double by the year 2015. Further deterioration of county waters will certainly occur unless there are changes in county-wide water management practices.

Of the many recommendations contained in its final report, *A Blueprint for Clean Water, Strategies to Protect and Restore Beaufort County's Waterways,* the CWTF concluded that if county citizenry and public officials did not accomplish their *ten steps to clean water*, the gradual decline of the near-pristine waterways was inevitable. Recognizing that implementing these ten recommendations would take an enormous effort, the CWTF proposed that Beaufort County - in cooperation with DHEC, the Town of Hilton Head and other municipalities, Jasper County, the Lowcountry Council of Governments, and the South Carolina Department of Natural Resources - initiate a Special Area Management Plan because of the overlapping jurisdictions and multi-watershed components of a number of the recommendations.

This comprehensive management plan encompasses a wide range of topics and activities: more advanced stormwater controls, wastewater disposal in the county, water quality monitoring, boating management, and education of the public about buffers, shorelines, septic tanks, hazardous materials, and boating.

The SAMP is laying a foundation for the consistent application of recommended water management policies and strategies. The plan will help to balance the needs and desires of the community with the management and protection of the county's water and natural resources. Much of the work has been delegated to the local communities, with the funds passed directly to them, or through them, to local contractors. Having the work performed by Beaufort County and local communities ensures that local concerns are being addressed by those best able to handle them.

Beaufort SAMP Area



PROGRAM FOCUS AREAS

The OCRM used the CWTF's strategy and plan and participant input as the basis for the development of the work plan. Based on the report of the CWTF, OCRM identified the following five major areas of endeavor that form the basis of the SAMP focus. These areas include limited research, public education, and comprehensive planning components that together form the basis for protecting the water resources of the county.

1. Stormwater Management

- Understand present water quality conditions in the watershed.
- Reduce and prevent further water quality degradation in the watershed.
- Improve stormwater standards for new developments and evaluate growth boundaries.
- Define important headwaters and develop additional measures to protect the upper reaches of tidal creeks.
- Evaluate effectiveness of stormwater management designs and operational practices, and adopt new stormwater best management practices.

2. Wastewater Management

- Improve the centralized wastewater system that encourages land application of treated wastewater in the county.
- Improve management of onsite disposal systems.

3. Water Quality Monitoring and Enforcement

- Provide a long-term environmental monitoring program for the county.
- Provide a monitoring feedback and enforcement program to facilitate corrective action plans for water quality protection.

4. Boating Impact Management

- Provide for orderly, low impact boating in Beaufort County.
- Encourage low impact growth in the boating industry.

5. Public Involvement and Education

- Provide for an informed and knowledgeable citizenry.
- Promote the recommendations from each focus area.

The initial phases of the program involve activities in each of these areas of focus. Subsequently, both activities and focus areas will be blended to produce an effective and workable management program for the people and waterways of Beaufort County.

BEAUFORT SAMP PROJECTS

The first year of the program focused on information acquisition, engineering and policy analyses, identification of specific monitoring needs to address the issues, and preparation of work statements and requests for proposals for all projects. The current year's work is focusing on implementation and completion of engineering and policy evaluations, integration of local jurisdictions into water resource management, assessment of management alternatives, and development of specific components of the management program for the watershed. During the final six months (May to October 2001), the focus will be on the synthesis of the foregoing into a functional storm- and wastewater management plan, including the development of long-term implementation mechanisms. The current status of each project, as of September 15, 2000, is briefly described below:

STORMWATER MANAGEMENT

Develop a Stormwater Utility for Beaufort County

Stormwater management systems require a comprehensive management approach to address flooding and stormwater quality issues and solutions. One mechanism to achieve this is the stormwater utility. This entity allows governments to address stormwater issues and to appropriate fees to fund stormwater management programs. Beaufort County prepared a feasibility study for the development of Beaufort County Stormwater Utility. The implementation of the utility is being accomplished through the SAMP.

Conducted through a grant of $250,000 to Beaufort County, this project began in October 1999; completion was anticipated for this month, but due to difficulties in establishing the rate structure and the ordinance and the developing of the billing system, an extension of time was requested by the county. The rate structure and cost of services analyses are over 70% complete, as is the development of the rate model. The master account file and customer service manual are under development.

Develop a Management Plan for Broad Creek

The Town of Hilton Head Island is addressing not just stormwater's impact on the water quality of Broad Creek, but also all aspects of water quality for the creek. The existing drainage ditch through the town's Ashmore Tract serves as a major drainage way for much of Port Royal Plantation and surrounding areas at the headwaters of Broad Creek. Because of the lack of adequate tidal flushing at its headwaters, the quality of the stormwater coming from this ditch is vital to the health of Broad Creek. The elements of this plan are intended to address water quality aspects of Broad Creek as well as recreational use of this resource. The baseline assessment of Broad Creek will form the basis for the management plan. In addition, an inventory of current boating activities in Broad Creek and a projection of future boating activity is being conducted.

Conducted with a matching grant of $90,000 with Hilton Head Island, this $175,000 project began in March 2000; completion is anticipated is August 2001. Water quality monitoring in the Broad Creek at established stations was initiated in May. A weather station was set up in June. The data collection program includes: wildlife, recreation, and water quality. Construction of a base map and data layers of resource information is in progress.

Develop Watershed-Level Stormwater Management Plans: Okatie Basin Pilot Study

Currently, local and state stormwater permitting programs are exclusively focused at the site level. Each proposed development project that requires stormwater permits is evaluated in relative isolation of all others. This leads to an uncoordinated and environmentally hostile solution to stormwater flow. Watershed level management of stormwater can create opportunities to make better use of natural drainage ways and consolidate stormwater management systems. With such an approach, the water quality benefits can be significant, and engineering and management costs can be reduced over time. Of the fourteen watersheds within Beaufort County, the Okatie Basin Watershed has been chosen for a pilot stormwater management program because it is a relatively small and undeveloped watershed. The project is in two phases:

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1 - A topograhic survey of all of the ditches, channels, canals, etc., of the Okatie including verification of those ditches, channels, and canals identified by the county in 1972 as well as verification of ground elevations within the Okatie.

2 - A watershed study for the Okatie Basin that will model stormwater flow to identify and locate potential problem areas, the stormwater needs of the watershed including the mitigation of impacts of future land disturbing activities, alternative approaches to address existing and future stormwater problems, recommendations for potential funding sources for implementation of findings, and design criteria and best management practices to reduce and prevent long-term water quality degradation.

Topographic survey work began in June with a matching grant (50:50) to Beaufort County of $36,950 for a total project fund of $73,900. All survey data, including that for planned unit developments, is scheduled for completion by November 2000. The request for qualifications for the modeling work is scheduled to be advertised this month, with contractor selection made in October. The modeling effort is anticipated to require six to eight months.

Identify Treatment Standards for Bridge and Road Runoff

South Carolina currently has a protective standard for bridge runoff when the bridge crossing lies within 1,000 feet of a shellfish bed. Bridges that cross outstanding recreational waters (ORW) or shellfish habitat (SFH) waters, but do not lie within 1,000 feet of shellfish beds, are not subject to this high standard. For the protection of all waters, consideration should be given to implementing a more protective standard for runoff from new bridges or bridge replacements when they cross ORW or SFH waters regardless of where the closest shellfish bed may lie. Similarly, consideration should be given to strengthening standards for road runoff to all waters. This work will determine specific improvements to road and bridge design and maintenance standards that will improve the protection of water quality. In addition, a case study that evaluates retrofit options for the Okatie Bridge and other roadways in the Okatie Basin Watershed will be evaluated.

The South Carolina Department of Transportation recently initiated a literature review of bridge and road runoff. Their final report is due soon and will be used to determine the necessity of new bridge and road standards or if additional study is required.

Develop River Quality Overlay District Ordinance

Recent studies demonstrate that small tidal creeks are more susceptible to the effects of pollution, both chemical and physical, than larger water bodies. Beaufort County has passed a River Quality Overlay District Zone that needs additional controls. However, the county needed assistance in identifying the boundaries of the district and in developing standards such as appropriate impervious cover limits for this new district. To assist, two workshops were held to provide an overview of the state-of-the-knowledge on how set backs, impervious surfaces, and surface and groundwater affect water quality. This workshop identified: criteria adequate for the protection of its receiving waters; appropriate set backs and the technical basis for these set backs; the appropriate levels of impervious surface to be permitted; and those activities that should be limited within the district.

The final report of the workshops will be ready for distribution early in October 2000. Following the release of the report, the county Planning Department and OCRM will prepare the ordinance, based on the workshop, for presentation to County Council for implementation.

WASTEWATER MANAGEMENT

Map Existing and Potential Direct Discharge and Land Application Sites

At present, it appears unlikely that any new direct discharge points for treated wastewater will be proposed in Beaufort County. Today, the trend is toward consolidating and eliminating existing discharge points and disposing of new wastewater flows by land application. There is concern, however, that the number of sites suitable for land application will decline as land development occurs within the county. A thorough review of the requirements for wastewater treatment and their application in Beaufort County will be performed. In particular, a requirement that wastewater effluent meet the shellfish water quality standards when land application is proposed even near shellfish harvesting waters or outstanding resource waters will be considered. The study will provide guidance for direct discharge and land application of wastewater in

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Beaufort County. Sites that could be used as future land disposal and backup disposal sites will be identified and mapped. Purchase, easement, and other strategies will be evaluated to protect such lands from alternative uses.

As part of their ongoing site evaluation program, the Beaufort Jasper Water and Sewer Authority has agreed to provide the evaluation and survey at no cost to the SAMP. The SAMP will produce a report on the resultant information.

Develop a Comprehensive Onsite Disposal System Program

Beaufort County has made a commitment to onsite disposal systems (OSDS), or septic tanks, in the county's rural areas by establishing sewer service areas. There is concern, however, that current programs for permitting new septic systems and managing existing systems may not sufficiently protect human health and water quality and resources. This study will provide a comprehensive evaluation of all aspects of OSDS permitting and maintenance to include an inspection and maintenance program and a comprehensive OSDS management plan for the county's rural areas. The issues of separation distance and density limitations will be evaluated. Consideration will be given to providing landowners with a wide range of alternative systems that can be maintained. A contractor to perform this study was selected on August 23 at a cost not to exceed $140,000. The contract is in negotiation.

WATER QUALITY MONITORING AND ENFORCEMENT

Develop a Formal Mechanism to Organize County Water Quality Monitoring

At present, many federal, state, and local agencies monitor the water quality and biotic conditions of Beaufort County's rivers and creeks. The range of monitoring activities and the number of organizations involved will increase in the near future. Current and future monitoring activities, if coordinated properly, will provide more efficient and effective use of the collected data. The data could be used in many ways, from identifying specific pollution sources to tracking the overall health of the county's waterways. The objectives of this project are to evaluate the current monitoring activities within Beaufort County and determine whether improvement or coordination of these activities is appropriate and feasible, considering the purpose and costs of the efforts.

A $20,000 contract with Thomas and Hutton Engineering was initiated in June 2000 with a completion date of December 2000.

BOATING IMPACT MANAGEMENT

Develop a Boating Management Plan for the County

Experts predict that the population of Beaufort County will double by 2015, and some areas of the county will grow even faster. Southern Beaufort County, excluding Hilton Head Island, is predicted to grow from 7,000 people in 1990 to 47,000 in 2020. This increased population will bring a predictable increase in boats and boating impacts on the county's waterways. Water quality and aquatic resources will be the main focus of this project. The objectives of the plan include: policies on siting marinas; mooring fields and private docks; restricted access of jet skis and/or all motorized boat traffic from particularly sensitive areas; the establishment of no- wake zones and creation of no discharge zones; the preparation of a comprehensive boater education campaign; and making additional pump-out facilities available.

A $60,000 study by Applied Technology and Management, Inc., will begin in September 2000 with a completion date of August 2001.

PUBLIC INVOLVEMENT AND EDUCATION

Improvement and protection of water quality in Beaufort County will largely depend on an involved public. Unless they are informed and participate in various activities related to water quality protection, needed changes in county policy will not be forthcoming. Six specific outreach and education efforts are part of the SAMP:

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Riparian Buffer Function and Maintenance

A citizen's guide in brochure form describing the importance, construction, and maintenance of backyard buffers will be produced. The contents are complete. Preparation of artwork and layout is in progress. The brochure is a product of OCRM at a cost of $2,000.

Onsite Disposal Systems, Permitting Standards and Maintenance

Many homeowners who use septic systems do not realize the simple steps that can be taken to maintain the performance level and life of their system. This project will provide a public education campaign on the proper operation and maintenance of septic systems. With an estimated cost of $6,000, this project has not yet been initiated.

Citizen Shoreline Watch

Citizen monitoring programs are becoming increasingly popular and successful across the county and serve to foster a deep community attachment to the water body being monitored. This, in turn, can translate into a commitment necessary to restore and protect the resources. A citizen's monitoring program for the Broad Creek and Okatie River will be initiated as pilot programs. Later, this could be expanded to other water bodies of concern. With an estimated cost of $3,000, this project has not yet been initiated.

Boater Education Programs for Transient Boaters

Direct enforcement of even typical and widely accepted boating regulations is very difficult, especially when a large number of boaters are transients as in Beaufort County. For this reason, boater education that prompts voluntary action is important. *The Complete Guide to Coastal Boating in South Carolina*, with emphasis on Beaufort County waters, is being prepared by the South Carolina Department of Natural Resources (SCDNR). This guide will be distributed at marinas and law enforcement stations and will encourage boaters to think of themselves as stewards of the waterways of South Carolina.

A contract was initiated in June 2000 with SCDNR with funding of $6,000 from the SAMP in addition to funds from SC Sea Grant Consortium and SCDNR for a total of $36,000. The brochure is in final review.

Homeowner Landscape Care

Chemicals that are often toxic to aquatic life are used by many people for may purposes. Ideally, the use of these chemicals would be limited to the minimum required and in conformance with the manufacturers' recommendations. Unfortunately, the average homeowner is the most likely user to apply chemicals when not needed or in too high concentrations. The objective of this project is to develop an education campaign on lawn care practices targeted at homeowners and lawn care companies. Landscaping that uses native plants that do not require many chemicals will be emphasized, as well as the proper use of toxic materials. With an estimated cost of $5,000, this project has not as yet been initiated.

Household Hazardous Waste Disposal

The recently completed baseline assessment of Broad Creek and the Okatie River suggest that much of the water quality and sediment degradation observed is associated with human activities. The establishment of a household hazardous waste drop-off site with an occasional *amnesty day* would encourage homeowners to properly dispose of waste products. With an estimated cost of $3,000, this project has not yet been initiated.

SAMP ADMINISTRATION

The SAMP is administered by the OCRM staff with the assistance of a number of committees and groups. Our intent is to ensure the participation of affected agencies and organizations and to promote the implementation of project goals. The SAMP is conducted by a project staff under the direction of Steve Moore, Director of Planning for OCRM. The Project Director has the primary responsibility for the conduct of the SAMP. He directs and supervises the project staff and chairs the SAMP Oversight Committee.

Administrative Board

The Administrative Board reviews the progress of the SAMP on a frequent basis and evaluates the achievement of goals and helps to refine project direction and activities. Initially, the Administrative Board helped develop criteria and procedures for the review of project milestones and products. Membership is comprised of:

Steve Moore, Director of Planning, OCRM
Debra Hernandez, Director of Program and Policy Development, OCRM
Stephen Cofer-Shabica, Program Manager, OCRM
Chris Brooks, Deputy Director, OCRM
Ed Kruse, NOAA Program Officer

Oversight Committee

The Beaufort SAMP Oversight Committee oversees the general conduct of the SAMP: provides advice on project activities, documents, and budgets; establishes the priorities, goals and objectives of the SAMP; and advocates this work within their organizations. Membership includes:

Stephen Cofer-Shabica, Program Manager, OCRM
Barry Connor, Beaufort County Council and Connor and Associates
David Harter, Hilton Head Fishing Club and Greater Island Committee
Sally Knowles, SCDHEC, Bureau of Water
Bill Marscher, Clean Water Task Force, Bluffton Area Community Association, and Greater Island Committee
Steve Moore, SCDHEC, OCRM
Sam Passmore, SC Coastal Conservation League
Dorothy Perkins, Citizen, Town of Hilton Head Island
Geoff Scott, NOAA
Bob VanDolah, SCDNR, Marine Resources Division

Policy Advisory Committee

The Policy Advisory Committee Advises the Oversight Committee on SAMP direction and goals, serves as a sounding board for SAMP recommendations, and informs their organizations of SAMP directions and events. Membership is comprised of:

Criswell Bickley, Jr., Executive Director, Lowcountry Council of Governments
Howard Brilliant, SCDHEC Board (First Congressional District)
Jim Chaffin, Developer, Spring Island Company
Woody Collins, Oysterman, Hilton Head Island
Frank Gibson, Resident Beaufort County, Marine Advisory Committee
Henry Lawton, Sr., SCDHEC/OCRM Appellate Panel (Jasper County)
Jean Lebro, Executive Vice President, Greater Beaufort Chamber of Commerce
Ross Lysinger, Boating/Marina Industry, Skull Creek Marina
Thomas E. McClary, Jasper County Council
Emmett McCracken, Mayor, Town of Bluffton
Charles Mitchell, The Branigar Organization
Dean Moss, Beaufort Jasper Sewer and Water Authority
Cyndi Mosteller, Citizen
Samual E. Murray, Mayor, Town of Port Royal
Bill Rauch, Mayor, City of Beaufort
Mac Sanders, Farmer, St. Helena Island
Nancy Schilling, SC Marine Association
Col. Beverly Snow, Jr., U.S.A. Retired, SCDHEC/OCRM Appellate Panel (Beaufort County)

Board of Technical Advisors

The Board of Technical Advisors provides technical advice and reviews and comments on draft reports and recommendations. Membership includes:

Russell Berry, SCDHEC, EQC
Colt Bowles, SCDHEC, EQC
Rocky Browder, SCDHEC, OCRM
Cindy Camacho, Beaufort County Planning
Don Campbell, SCDHEC, Lowcountry Health District
Jill Foster, Town of Hilton Head Island Planning
Nina Petrovich, NOAA Coastal Services Center
Ray Vaughan, SCDOT

SCHEDULE OF SAMP MEETINGS

September 21 - Administrative Board Meeting
10:00 AM - OCRM, Charleston

September 25 - OSDS Contract Negotiation Meeting
10:00 AM - OCRM, Charleston

November 15 - Joint Meeting - Oversight and Policy Advisory Committees and Technical Advisory Board
10:00 a.m. Naval Hospital, Port Royal

Steve Moore
Director of Planning, OCRM
Beaufort SAMP Program Director
843-747-4323, Extension 136
Email: moorese@chastn86.dhec.state.sc.us

Stephen Cofer-Shabica, Ph.D.
Beaufort SAMP Program Manager
843-856-9405
Email: shabcof@viperlink.net

South Carolina Department of Health and Environmental Control
Office of Ocean and Coastal Resource Management
1362 McMillan Avenue, Suite 400
Charleston, SC 29405