

**NOAA/EPA DECISIONS ON CONDITIONS FOR THE
SOUTH CAROLINA COASTAL NONPOINT PROGRAM**

FOREWORD

This document contains decisions on conditions of approval placed on the coastal nonpoint pollution control program submitted by the State of South Carolina pursuant to Section 6217(a) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA). The Findings for South Carolina's coastal nonpoint program were issued on *February 23, 1998* and are available at <http://coastalmanagement.noaa.gov/czm/6217/findings.html>. Since that time, South Carolina has undertaken a number of actions to address conditions of approval on its coastal nonpoint program. Based on those actions and on supplemental material South Carolina has provided to document how the conditions have been met, the National Oceanic and Atmospheric Administration (NOAA) and the U.S. Environmental Protection Agency (EPA) have reached a decision that South Carolina has satisfied conditions of approval.

This document is organized in the same fashion as the Findings for South Carolina's coastal nonpoint pollution control program (the Findings). Where the original Findings included a condition, this document repeats the condition, includes the decision that the condition has been satisfied, and provides a rationale for the decision. For further understanding of terms in this document and the basis for these decisions, the reader is referred to the following:

Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters (EPA, January 1993)

Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance (NOAA and EPA, January 1993)

Flexibility for State Coastal Nonpoint Programs (NOAA and EPA, March 1995)

Final Administrative Changes to the Coastal Nonpoint Pollution Control Program Guidance for Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) (NOAA and EPA, October, 1998)

FINAL APPROVAL DECISION

NOAA and EPA find that South Carolina has satisfied all conditions placed on approval of the South Carolina coastal nonpoint pollution control program submitted to NOAA and EPA pursuant to Section 6217(a) of the Coastal Zone Act Reauthorization Amendments of 1990. Therefore, South Carolina's coastal nonpoint program meets all program requirements and is hereby fully approved, constituting a final approval decision for the program.

Please note that the approval decision made for the South Carolina coastal nonpoint program does not relieve the State of any requirements under the Endangered Species Act.

AGRICULTURE

CONDITION: Within one year, South Carolina will develop a strategy (in accordance with section XIV, page 14) to implement the agricultural management measures throughout the 6217 management area.

(Note: The reference to Section XIV in each of the conditions refers to the “strategy and evaluation of backup authorities” section of the Findings.)

DECISION: South Carolina has satisfied this condition.

RATIONALE: For confined animal facilities, South Carolina published regulations in 1998 which govern the storage and disposal of animal waste as well as dead animals. The regulations address all swine facilities. Those facilities with a lagoon, waste storage pond or treatment system having less than 70 finishing hogs or 10,000 pounds or less of normal production animal live weight at any one time are excluded from obtaining a permit but must have and implement a waste management plan that meets the requirements of the regulations and the 1996 South Carolina Confined Swine Feeding Operations Act (S.C. Code Ann. §§ 47-20-10 *et seq.*). Facilities with more than 70 finishing hogs or 10,000 pounds or less of normal production animal live weight, but less than 210 finishing hogs and 30,000 pounds or less of normal production animal live weight are excluded from having a permit but must submit a waste management plan to the South Carolina Department of Health and Environmental Control (SCDHEC) and implement the plan as above. All other swine facilities must have a permit for operation. The regulations address the type of storage facility, waste management, and setbacks from water bodies and property lines. Existing facilities with permits issued by SCDHEC before July 1, 1996, are deemed permitted unless they are closed for a certain period, expand, or change their operations. Similar regulations have been issued for animal operations other than swine facilities, as well. These regulations meet the requirements for management of confined animal facilities as well as the nutrient management measure for animal operations.

For the remainder of the management measures (erosion and sediment control, nutrient management for non-confined animal facilities, pesticide management, grazing management and irrigation), the state has provided a legal opinion from the Staff Counsel for SCDHEC that describes the ability of the State to use the Pollution Control Act (PCA), S.C. Code Ann. §§ 48-1-10 *et seq.* (1987 & Supp. 1998) as an enforceable policy and mechanism for the purposes of the coastal nonpoint program. In part, the opinion reads “. . . the Department has broad authority to prevent and control all non-point source pollution in the State, whether such cause violations of water quality standards or not.” Thus, the State is able to ensure implementation of these agricultural management measures in conformity with the 6217(g) guidance.

FORESTRY

CONDITION: Within one year, South Carolina will develop a strategy (in accordance with section XIV, page 14) to ensure implementation of the forestry management measures throughout the 6217 management area.

DECISION: South Carolina has satisfied this condition.

RATIONALE: South Carolina has provided a legal opinion from attorneys representing the South Carolina Department of Health and Environmental Control (SCDHEC) certifying the ability of the state to mandate pollution control measures, including Best Management Practices, using the authority of the Pollution Control Act (PCA). Under this authority, the South Carolina Coastal Management Program can require implementation of the Coastal Nonpoint Pollution Control Program throughout the management area. The PCA states in part “it shall be unlawful for any person, directly or indirectly, to throw, drain, run, allow to seep or otherwise discharge into the environment of the state organic or inorganic matter, including sewage, industrial wastes and other wastes, except as in compliance with a permit. . . .” (As quoted in a Legal Memorandum from Kelly D.H. Lowry to Debra Hernandez, dated April 27, 1999.) Thus, the State is able to require the implementation of management measures for forestry in conformity with the 6217(g) guidance.

With respect to implementation of Best Management Practices (BMP) in forestlands, South Carolina has provided a Memorandum of Understanding between SCDHEC and the South Carolina Forestry Commission (SCFC) to cover each agency’s responsibilities for implementation of nonpoint source measures on forestlands in South Carolina. The SCFC implements the state voluntary forestry BMP monitoring program through identification of areas where forestry operations are occurring and provides courtesy exams to assess implementation of BMPs. As part of this agreement, the SCFC agrees to notify SCDHEC of the results of the courtesy exam program if the involved landowner/forestry operator has BMP deficiencies that have caused significant instream water quality violations. Where such problems exist, SCDHEC investigates and undertakes efforts to rectify the situation, including, where necessary, the requirement for implementing the appropriate BMPs. The State also provided an example of a consent order issued to a forestry operator to compel BMP implementation and assess a civil penalty for past failure to implement appropriate measures.

URBAN – NEW DEVELOPMENT

CONDITION: Within two years, South Carolina will include in its program management measures and enforceable policies and mechanisms for (1) the maintenance of post development discharge rates and volumes at predevelopment levels for sites disturbing less than two acres and (2) for a total suspended solids loading reduction of 80 percent for sites disturbing less than 10 acres. Within one year, South Carolina will develop a strategy (in accordance with section XIV, page 14) to ensure implementation of the management measures throughout the 6217 management area on sites not covered under the State’s existing program.

DECISION: South Carolina has satisfied these conditions.

RATIONALE: South Carolina regulations on stormwater management contain the following provisions:

- For land disturbing activities involving two (2) acres or less of actual land disturbance which are not part of a larger common plan of development or sale, the person responsible for the

land disturbing activity shall submit a simplified stormwater management and sediment control plan....” (R72-305B(1))

- For land disturbing activities involving more than two (2) acres and less than five (5) acres of actual land disturbance which are not part of a larger common plan of development or sale, a simplified permitting and approval process will be used meeting the requirements of R.72-307I. These activities are required to utilize Best Management Practices (BMPs) to control erosion and sediment and to utilize appropriate measures to control the quantity of stormwater runoff.” (R.72-305B(2))
- For land disturbing activities disturbing more than five (5) acres, the requirements of R.72-305 and R.72-307 will apply. (R.72-305B(3))
- The BMPs utilized above must remove 80 percent of TSS or 0.5 ml/l peak settleable solids concentration, whichever is less. (R.72-307C(5)(b))

The stormwater management and sediment control plan for land disturbing activities of greater than two (2) acres but less than five (5) acres which are not part of a larger common plan of development or sale shall contain the following information, as applicable:

- Post-development peak discharge rates shall not exceed pre-development discharge rates for the 2- and 10-year frequency 24-hour duration storm event. Implementing agencies may utilize a less frequent storm event (e.g. 25-year, 24-hour) to address existing or future stormwater quantity or quality problems. (R.72-307I(3)(e)1)
- Discharge velocities shall be reduced to provide a nonerosive velocity flow from a structure, channel, or other control measure or the velocity of the 10-year, 24-hour storm runoff in the receiving waterway prior to the land disturbing activity, whichever is greater. (R.72-307I(3)(e)2).

Sites disturbing two to five acres and not part of a larger project are required to meet R.72-307I. 307I(3)(e)1 & 2 specify discharge rates and velocities. South Carolina has demonstrated that small developments not part of a larger project represent a small fraction of the total development activity in the state. While these projects do not have to meet specific stormwater quality criteria for total suspended solids, other siting requirements limit the potential for stormwater runoff to cause impacts to surface water quality.

A statewide stormwater management and sediment/erosion control field manual was produced in August 2005 and is online at www.scdhec.gov/environment/ocrm/pubs/tech_docs_water.htm#bmp. This field manual includes information on innovative techniques, installation and maintenance specifications, as well as erosion prevention and sediment control BMPs. The manual also includes preventative measures, a troubleshooting guide, standardized keys and downloadable AutoCAD files to facilitate the submission of engineering plans for review and permitting.

With respect to implementation of management measures, South Carolina has provided a legal opinion from attorneys representing the South Carolina Department of Health and Environmental Control (SCDHEC) certifying the ability of the state to mandate pollution control measures, including Best Management Practices, using the authority of the Pollution Control Act (see above). In addition, SCDHEC has promulgated regulations covering land disturbance and erosion control activities, and NPDES stormwater discharges. Permits granted under these regulations can include management measures to abate or control pollution.

URBAN – WATERSHED PROTECTION, SITE DEVELOPMENT AND EXISTING DEVELOPMENT

CONDITION: Within three years, South Carolina will include in its program management measures in conformity with the 6217(g) guidance to avoid conversion of areas susceptible to erosion and sediment loss; protect the natural integrity of waterbodies and natural drainage systems; and limit land disturbance activities. Within one year, South Carolina will develop a strategy (in accordance with section XIV, page 14) to ensure implementation of the management measures throughout the 6217 management area.

DECISION: South Carolina has satisfied these conditions.

RATIONALE: A number of programs are in place in South Carolina that, operating together, address the Watershed Protection Management Measure. Under the coastal program, South Carolina has made good use of the Special Area Management Plan (SAMP) process, completing SAMPs for the Ashley River, Charleston Harbor, and Beaufort County, and currently conducting SAMPs for the Cooper River Corridor in Berkeley County and Murrels Inlet in Georgetown and Horry Counties. These SAMPs contribute to watershed protection by limiting the potential for future development and land disturbance activities. In addition, the state's Stormwater Management and Sediment Control Reduction Act (SMSRA) (S.C. Code Ann. § 48-14-10 et seq.) allows local governments to request special protection for a watershed.

Comprehensive watershed management may also be undertaken through the state's NPS Management Program through section 319 funding. For example, 319-funded staff are currently developing watershed-based plans for two 12 digit HUC scale watersheds in the Santee and Edisto Basins. South Carolina has also supported the implementation of several watershed plans, including illicit discharge detection and identifying failing septic systems.

Another statewide program that addresses watershed protection is the Watershed Water Quality Assessment (WWQA), developed and implemented by the Bureau of Water. Each of South Carolina's eight major basins is reviewed once every five years and a WWQA is produced which analyzes water quality, land use, and growth potential for individual watersheds. The Pee Dee watershed review is currently being undertaken and the assessment document should be produced in early 2008. Three other major coastal watershed basins (Santee, Salkehatchie and Savannah) have already been completed for this assessment cycle. All WWQA information is available online at www.scdhec.gov/environment/water/shed.

With respect to implementation of management measures, South Carolina has provided a legal opinion from attorneys representing the South Carolina Department of Health and Environmental Control (SCDHEC) certifying the ability of the state to mandate pollution control measures, including Best Management Practices, using the authority of the Pollution Control Act (see above).

URBAN – CONSTRUCTION SITE CHEMICAL CONTROL

CONDITION: Within two years, South Carolina will include in its program management measures for construction site chemical control in conformity with the 6217(g) guidance. Within one year, South Carolina will develop a strategy (in accordance with section XIV, page 14) to ensure implementation of the measure throughout the 6217 management area.

DECISION: South Carolina has met these conditions.

RATIONALE: By virtue of statewide coverage under the National Pollutant Discharge Elimination System (NPDES) Phase I and Phase II storm water regulations, South Carolina is no longer subject to the construction site chemical control management measure.

However, relative to this management measure, SCDHEC has developed a statewide stormwater management and sediment and erosion control field manual. The field manual includes information on innovative techniques, installation and maintenance specifications, as well as erosion prevention and sediment control BMPs. The manual contains preventative measures and a troubleshooting guide so that solutions can be quickly identified.

URBAN – NEW AND OPERATING ONSITE DISPOSAL SYSTEMS (OSDS)

CONDITION: Within three years, South Carolina will include in its program management measures in conformity with the 6217(g) guidance to address: 1) denitrification where nitrogen-limited surface waters may be adversely affected by excess nitrogen loadings from OSDS; 2) inspection and maintenance of existing OSDS systems; and, 3) adequate separation distances between OSDS system components and groundwater that is closely hydrologically connected to surface waters. Within two years, South Carolina will include in its program enforceable policies and mechanisms to ensure implementation of the management measure for operation and maintenance of existing OSDS.

DECISION: South Carolina has satisfied these conditions.

RATIONALE: South Carolina's Five-Year Action Strategy for 1998-2003 includes five actions (Urban Activities: action items 6-10) related to OSDS management, and its Action Strategy for 2003-2008 includes four actions (Urban Activities: action items 3-6) related to OSDS management. These actions, along with other state and local efforts, satisfy these conditions.

To reduce nitrogen contributions from OSDS in nitrogen-limited surface waters, South Carolina is encouraging the replacement of failing or inadequate onsite disposal systems with alternate systems and assisting local governments to obtain State Revolving Fund (SRF) low interest loans

for this purpose. South Carolina is also encouraging the development of onsite disposal management entities, which will further address nitrogen load reductions from OSDS. NOAA and EPA encourage South Carolina to give serious consideration to the recommendation in the 2002 Beaufort County OSDS Management Report to require innovative nitrogen-reducing systems for new and upgraded large-capacity systems, as well as for all new systems located in sandy soils (Beaufort County OSDS Management Report, Appendix L, page 457), at least within the State's coastal counties.

Inspections and maintenance of OSDS in South Carolina's coastal nonpoint management area rely on a mix of voluntary and regulatory approaches. Efforts are targeted toward areas of greatest concern and susceptibility, such as barrier island communities. The City of Folly Beach, on a barrier island, passed an ordinance in 2005 to require point-of-sale inspections of OSDS and corrections of any failures. Another barrier island city, Isle of Palms, also requires point-of-sale inspections of OSDS. In the coastal town of McClellanville, an OSDS management program was established in 2006 in which homeowners served by OSDS receive reminder postcards to pump out their tanks and are asked to return a second card showing that they had their systems pumped. The barrier island Town of Edisto Beach initiated a similar outreach campaign that included sending a letter to all OSDS property owners requesting inspections and repairs and that these owners notify Town Hall for officials to log in each inspection date. The letter also included educational materials that stressed the importance of septic system maintenance. SCDHEC staff are currently also working with the Town of Bluffton to establish an inspection and maintenance program for the town and surrounding county areas that border the May River in Beaufort County.

The State continues to invest in strategies to increase inspections and maintenance of OSDS through a variety of means, including the development and promotion of model ordinances for point-of-sale inspections, other comprehensive OSDS management options, and public education initiatives. South Carolina also funded and provided training for a capacity-building project for OSDS inspections and maintenance in the Sewee to Santee region of Charleston County, as well as several other communities near the coast. The Sewee to Santee project involved the analysis of 303 completed surveys on OSDS maintenance, as well as the systematic inspection of 43 septic systems in the project area. The study documented that nearly 70% of the region favor the formation of a wastewater management entity, and are willing to contribute financially, despite the relatively poor economic conditions of this region. The State plans to build on this effort to increase OSDS inspections. The State has also launched an initiative to work with local governments in the coastal nonpoint management area to steer them toward funding opportunities for increasing inspections and maintenance.

South Carolina launched its Onsite Septic System Management Tool Kit to local governments in CD form in 2006 and online in 2007. The interactive tool kit provides information to assist local planners and decision makers to develop a comprehensive OSDS management strategy. The toolkit includes a database template for tracking inspections and other OSDS actions, Web links to state and national resources, and a collection of 80 presentations, documents, and septic management ordinance examples and templates.

In 2005, South Carolina conducted infrared thermal imagery to identify bacteria contamination from onsite septic systems in the Edisto and Santee River basins. Follow-up ground reconnaissance was conducted, and four “hot spots” with contamination from failing OSDS were discovered and are being addressed.

Finally, South Carolina has developed and committed to implementing several Special Area Management Plans (SAMPs) which focus on water quality and OSDS issues. For example, the Charleston River and Beaufort County SAMPs both recommend developing comprehensive OSDS management programs that will further address inspections and maintenance. Other SAMPs may be developed or updated to incorporate similar actions.

To protect groundwater resources, and consequently, interconnected coastal waters, from septic system effluent, South Carolina requires a six-inch vertical separation distance to the seasonal high water table (SHWT) using a conservative methodology for determining SHWT. South Carolina measures SHWT by identifying the first occurrence of grey mottles, also defined as chroma 1 or 2 redox depletions in the soil profile.

A technical evaluation and report of the efficacy of the state’s vertical separation distance practices on groundwater quality concluded that fecal coliform bacteria from OSDS in vulnerable coastal environments in Charleston County do not generally contaminate groundwater resources. This study, titled “Groundwater Assessment, Onsite Wastewater Systems Assessment Program; Lowcountry Sites, Charleston County, South Carolina” (June 2006), was peer-reviewed by an independent panel of three experts, with two of the three experts concluding that the study was well designed and executed and the results were reasonable and supported by the field data.

URBAN – ROADS, HIGHWAYS, AND BRIDGES

CONDITION: Within three years, South Carolina will include in its program management measures and enforceable policies and mechanisms to address construction site chemical control and operation and maintenance for private and local roads.

DECISION: South Carolina has satisfied these conditions.

RATIONALE: By virtue of statewide coverage under NPDES Phase I and Phase II storm water regulations, South Carolina is no longer subject to the construction site chemical control management measures for roads, highways, and bridges. Within urbanized areas subject to Phase I or Phase II municipal separate storm sewer system (MS4) permits, South Carolina is no longer subject to the management measures for operation and maintenance for roads, highways, and bridges.

The South Carolina Department of Health and Environmental Control has issued a legal opinion certifying the ability of the state to mandate pollution control measures, including Best Management Practices for operation and maintenance for private and local roads, using the authority of the Pollution Control Act (see above).

HYDROMODIFICATION

CONDITION: Within three years, South Carolina will include in its program: 1) management measures and authorities to manage new channelization projects throughout the 6217 management area; 2) management measures and authorities to improve surface water quality and restore instream and riparian habitat through the operation and maintenance of existing modified channels; 3) management measures and authorities to manage the operation of dams to protect surface water quality and instream and riparian habitat and to assess nonpoint source problems resulting from excessive surface water withdrawals; 4) management measures and authorities to address chemical and pollutant control for dam construction; and 5) management measures and authorities to identify and develop strategies to solve existing nonpoint source problems caused by streambank or shoreline erosion that do not come up for review under existing permit authorities.

DECISION: South Carolina has satisfied this condition.

RATIONALE: With respect to chemical control during dam construction, by virtue of statewide coverage under NPDES Phase I and Phase II storm water regulations, South Carolina is no longer subject to this management measure element.

South Carolina will use Critical Area Permits, Coastal Zone Consistency, NPDES permits, and 401 certifications to improve regulation of water quality, and instream and riparian habitat impacts from hydromodification activities. For example, staff reviewing 401 certifications must assess all direct and indirect water quality impacts over the life of the project, including physical, chemical and biological impacts. NPDES permits issued in the coastal zone must also be consistent with South Carolina's Coastal Zone Management Plan.

South Carolina has identified and carried out several projects to mitigate the negative impacts from existing hydromodification activities and streambank and shoreline erosion. Through its Special Area Management Planning (SAMP) efforts, the South Carolina Office of Ocean and Coastal Resource Management (OCRM) has identified several projects that should be undertaken to improve water quality and habitat for existing modified channels. For example, the watershed plan for the Okatie Basin, developed through the Beaufort County SAMP, calls for hydrologically restoring several swamp forest areas that were previously ditched and drained. Numerous other projects have been funded through South Carolina's 319 program and other sources. In addition, OCRM has contracted with the University of South Carolina's Baruch Institute to investigate the use of an alternative stabilization method along shoreline adjacent to the causeway at the Baruch Marine Field Laboratory that will allow for a sloped bank and the growth of native vegetation, as opposed to a bulkhead.

The state has also developed and provided technical assistance to citizens, local governments, contractors and permit reviews, to improve hydromodification design and management. For example, South Carolina's *Stormwater Best Management Practices Handbook* offers guidance to avoid water quality and habitat impacts from hydromodification projects such as minimizing streambank clearing and stabilizing the bank fully when complete. The state has also developed a brochure on a wetland restoration demonstration project conducted along a hydromodification

channel. The brochure, which was distributed throughout the coastal zone, uses the restoration project as a case study to promote other projects that will address existing nonpoint source problems from hydromodification activities.

The South Carolina Department of Health and Environmental Control has issued a legal opinion certifying the ability of the state to mandate pollution control measures, including best management practices, using the authority of the Pollution Control Act (see above).

WETLANDS, RIPARIAN AREAS AND VEGETATED TREATMENT SYSTEMS

CONDITION: Within three years, the State will include in its program management measures in conformity with the 6217 (g) guidance for wetlands/riparian areas not addressed under existing permit authorities.

DECISION: South Carolina has satisfied this condition.

RATIONALE: Since receiving its conditional approval, South Carolina has undertaken several efforts to augment its permitting programs to further protect and restore wetland and riparian areas. The state has completed several wetland restoration projects, including a project in Dorchester County that restored approximately 9.5 acres. The state has also initiated a wetland and riparian restoration program and began a coastal urban stream corridor restoration initiative to provide ongoing technical assistance and guidance for local governments in the identification and restoration of impaired stream corridors and associated wetlands. Although the formal Coastal Stream Corridor Restoration Initiative has been inactive recently due to lack of funding, the state continues to support similar efforts under other grant programs, such as the Community Assistance Grant Program. NOAA and EPA encourage South Carolina to continue to promote wetland and riparian restoration and protection efforts such as these.

South Carolina has also identified and begun to implement several other wetland and riparian restoration projects through its Special Area Management Planning and other efforts. For example, South Carolina contracted with the College of Charleston to promote the use of vegetative buffers in the City of Charleston through a wetland buffer demonstration project at Brittlebank Park. The demonstration project provides a highly visible and publicly accessible model learning site. Educational signage describes the function of the buffers and the native plant species being utilized at the site.

In addition to these projects, South Carolina has also developed several technical assistance tools and mechanisms to assist local governments, citizens, and developers in protecting and restoring wetlands and riparian buffers. In 2001, South Carolina worked with universities and others to develop a GIS tool to evaluate and help protect wetlands for the 797 square mile Broad and New River watershed. Guidance documents produced include: Critical Line Buffer Ordinances – Guidance for Coastal Communities; Backyard Buffers for the South Carolina Low Country; and Vegetated Riparian Buffers and Buffer Ordinances. The South Carolina Office of Ocean and Coastal Resource Management and National Estuarine Research Reserves have used these documents as the basis for workshops and trainings for local decision-makers. Taken together, these initiatives are sufficient to address this condition.

