

**NORTH CAROLINA COASTAL NONPOINT PROGRAM
NOAA/EPA DECISIONS ON CONDITIONS OF APPROVAL**

FOREWORD

This document contains the basis for NOAA and EPA's decision to fully approve North Carolina's Coastal Nonpoint Pollution Control Program (coastal nonpoint program). It discusses how the State has met each of the conditions of approval placed on the coastal nonpoint program submitted by North Carolina pursuant to Section 6217(a) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA).

The Findings for North Carolina's coastal nonpoint program were issued on February 23, 1998. Since that time, North Carolina has undertaken a number of actions to address conditions of approval on its coastal nonpoint program. Based on those actions and on materials the State 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) find that North Carolina has satisfied all conditions of approval.

This document is organized in the same fashion as the Findings for North Carolina's coastal nonpoint program. Where the Findings included a condition, this document repeats the condition, and discusses how the condition has been satisfied. 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); and *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 the State of North Carolina has satisfied all conditions placed on approval of the North Carolina coastal nonpoint program submitted to NOAA and EPA pursuant to Section 6217(a) of CZARA. Therefore, North 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 North Carolina coastal nonpoint program does not relieve the State of any requirements under the Endangered Species Act.

I. BOUNDARY

ORIGINAL FINDING: North Carolina’s proposed 6217 management area excludes existing land and water uses that have or are reasonably expected to have a significant impact on the coastal waters of the State.

CONDITION: Within one year, the North Carolina Department of Environment, Health, and Natural Resources, U.S. Environmental Protection Agency, National Oceanic and Atmospheric Administration, and other relevant State, local, and Federal agencies will participate in a cooperative process to review relevant information and to determine an appropriate 6217 management area boundary to protect the State’s coastal waters from nonpoint source pollution.

North Carolina’s program will include management measures in conformity with the 6217(g) guidance, and enforceable policies and mechanisms that ensure implementation of the management measures throughout an expanded 6217 management area.

DECISION: North Carolina has satisfied this condition.

RATIONALE: North Carolina has proposed a 6217 management area that encompasses the existing coastal area plus portions of three additional counties: Martin within the Chowan basin; Pitt within the Tar basin; and Jones within the White Oak and Neuse basins. This boundary includes all 14-digit hydrologic units that drain directly into coastal or estuarine waters.

North Carolina acknowledges that there are nutrient-related impacts to coastal waters from activities beyond the 6217 management area. To address those, the state has designated the waters within the Neuse and Tar-Pamlico river basins as nutrient sensitive, and is implementing comprehensive strategies in those basins. The state will maximize implementation of management measures within the 6217 management area, but will implement the nutrient sensitive waters strategies throughout the basins.

North Carolina has proposed a 6217 management area that goes beyond the existing coastal zone, as called for in the condition. This management area is consistent with neighboring states, which are using their coastal counties as the 6217 management area.

NOAA and EPA issued guidance on “Flexibility for State Coastal Nonpoint Programs” on March 16, 1995, which states that “NOAA and EPA recognize the limitations of the data that were used in making [6217 management area] recommendations and...expect that some states and territories...may submit an alternative, less extensive 6217 management area [than NOAA and EPA’s recommendation].” In addition, the “Final Administrative Changes to the Coastal Nonpoint Pollution Control Program Guidance for Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990” (Administrative Changes) allows states to “further exclude sources [of nonpoint pollution]...on a geographic basis” where data show that these sources are not, and are not reasonably expected to become, significant either individually or cumulatively. Based on the data supplied by North Carolina and the guidance issued by NOAA and EPA in 1995 and 1998, North Carolina’s proposed boundary is approved.

II. AGRICULTURE

ORIGINAL FINDING: North Carolina's program includes management measures in conformity with the 6217(g) guidance, except the program does not include management measures for pesticide management, irrigation water management, and does not include the limiting nutrient concept as part of the nutrient management measure. North Carolina has enforceable policies and mechanisms to ensure implementation for some confined animal facilities, but cannot ensure implementation for all facilities as described in the 6217(g) guidance. North Carolina has identified a backup enforceable policy and mechanism to implement the erosion and sediment control management measure which also may be used for other agricultural management measures, but has not demonstrated the authority's ability to ensure implementation throughout the 6217 management area.

CONDITION: Within two years, North Carolina will include in its program management measures in conformity with the agricultural management measures for nutrient management, pesticide management, and irrigation water management. Within one year, North Carolina will develop a strategy (in accordance with section XIV, page 14) to implement the agricultural management measures throughout the 6217 management area.

DECISION: North Carolina has satisfied this condition.

RATIONALE: Nutrient Management: The original finding regarding the nutrient management measure stated that North Carolina's measures to manage nutrients did not include the limiting nutrient concept, and that the state did not identify enforceable policies and mechanisms to ensure implementation of the measure throughout the 6217 management area. Within the Neuse River Basin, nutrient management rules require that all persons applying fertilizer to more than 50 acres need to develop a nutrient management plan based upon limiting nutrients. The Environmental Management Commission (EMC) has approved similar rules for the Tar-Pamlico Basin, and the Tar-Pamlico rules must also maintain phosphorus loadings at 1991 levels. Although such comprehensive rules have not been proposed for other coastal basins, the state Cooperative Extension Service encourages implementation of the limiting nutrient concept as a water quality management tool throughout the state.

The Neuse and Tar-Pamlico Nutrient Sensitive Waters Management Strategies include enforceable regulations and will be used to implement relevant agricultural measures, as well as urban and hydromodification measures. The Neuse strategy will achieve a thirty percent reduction in nitrogen loadings by employing a required 50-foot riparian buffer; mandatory, approved stormwater management plans for 15 local governments in the basin; a rule requiring agricultural nutrient management planning; and point source reductions.

The Tar-Pamlico riparian buffer protection rules became effective in January 2000. The nutrient management, stormwater, and agriculture rules became effective in April 2001. The nutrient management rule requires all persons who apply fertilizer in the basin, with the exception of residential landowners who apply to their own property, to either complete training offered by

the state or have a certified nutrient management plan in place for the lands that they fertilize. The "zero acre" lower threshold is more stringent than the Neuse's 50 acres.

The Neuse and Tar-Pamlico basins are those areas the state has identified as nutrient sensitive. Nutrient Sensitive Waters are defined by rule as “those waters which are so designated in the classification schedule in order to limit the discharge of nutrients” (15A NCAC 2B .0202(49)). The EMC may classify waters as Nutrient Sensitive Waters upon a finding that such waters are experiencing or are subject to excessive growths of microscopic or macroscopic vegetation. Nutrient Sensitive Waters comprise approximately 29 percent of the state’s 6217 management area. Some 19 percent of the registered animal operations and 34 percent of the cropland in the 6217 management area are within the watersheds Neuse and Tar-Pamlico that contain Nutrient Sensitive Waters.

The state’s Neuse and Tar-Pamlico agricultural rules show that North Carolina has the authority to apply controls on nutrient sources. The state has done so in the areas identified as nutrient sensitive, and the state has the authority to give other areas a similar designation, if necessary. Although not required for program approval, it is the position of NOAA and EPA that expanding the nutrient sensitive waters strategies to other coastal basins would help protect the state’s coastal waters. North Carolina should use the nutrient sensitive waters authority in other coastal watersheds as necessary to ensure widespread implementation of the agricultural management measures. An assessment of the need to address nutrient management in those areas not now covered and details on expanding this approach to other basins should be included in the 15-year program implementation strategy.

Animal Feeding Operations: The large numbers of Animal Feeding Operations in North Carolina are affected by three programs: the National Pollutant Discharge Elimination System (NPDES) permitting program, the state-based non-NPDES permitting program, and the Coastal Nonpoint Program. It is important to clarify the numbers of threshold animals and requirements for these programs in order to establish the relationship among them. The entry threshold numbers of animals vary for the three programs:

Type of Animal	North Carolina State-based, Non-NPDES Programs	Coastal Nonpoint Program (Confined Animal Feeding Operations)		NPDES Permitting Program (Concentrated Animal Feeding Operations)	
		Small facilities	Large facilities	Middle-tier operations*	Large-tier operations
Head of cattle	100	50	300	300	1,000
Horses	75	100	200	150	500
Swine	250	100	200	750	2,500
Dairies	100	20	70	200	700
Sheep	1,000	NA	NA	3,000	10,000
Birds (with a liquid waste system)	30,000	5,000	15,000	9,000	30,000

*only those facilities that have had discharge(s) to surface waters

Under North Carolina regulations at 15A NCAC 02H .0200 et seq., the state issues state-based, non-NPDES permits to new and existing confined animal facilities with numbers of animals equal to or greater than the above thresholds. New and existing facilities under the thresholds are not subject to the individual nondischarge permit regulations, but are “deemed to be permitted,” and must also meet certain standards. Only facilities below the thresholds “for which waste does not reach the surface waters by runoff, drift, direct application or direct discharge during operation or land application” are considered exempt from permits. Also, the state may determine, on a case-by-case basis based on existing or projected environmental impacts, that facilities of any size require a permit (15 NCAC 2H.0217(b)). If a facility fails to follow an approved animal waste management plan, that facility must apply for a state-based individual nondischarge permit.

Concentrated animal feeding operations (CAFOs) are specifically identified as point sources in the Clean Water Act and therefore are not subject to the Coastal Nonpoint Program. However, with one exception, the state does not currently provide NPDES permit coverage for concentrated animal feeding operations. The EPA Office of Inspector General has concluded that the state-based permitting program does not fulfill the requirements of the NPDES permitting program. Any comment or approvals provided by this document should not be interpreted to imply approval for any State activities related to CAFO permitting.

The NPDES regulations at 40 CFR 122.23 define CAFOs based on specific criteria and conditions. Large-tier operations (see above table) are required to obtain NPDES permits. Middle-tier operations are required to obtain NPDES permits only if they have discharged pollutants through a man-made device or through direct contact of confined animals with surface waters. Small operations with fewer numbers of animals than the thresholds for the middle tier can be designated as concentrated animal feeding operations and required to obtain NPDES permit coverage after an onsite inspection. Middle-tier operations and smaller operations that do not discharge are not point sources and would be covered under the Coastal Nonpoint Program.

With some exceptions, the thresholds for the state-based non-NPDES permit are generally comparable to the 6217 applicability statements for large and small facilities for the Coastal Nonpoint Program. The state-based programs are adequate to meet the confined animal facilities measures required by CZARA section 6217 for animal feeding operations not considered to be point sources under NPDES or otherwise not requiring a NPDES permit.

Pesticide Management and Irrigation Water Management: The State’s description of the Cooperative Extension Service’s active Integrated Pest Management promotional efforts satisfies the management measures condition on the pesticide measure. Also, the fact that only 2.7 percent of harvested acres within the 6217 management area are irrigated is sufficient to justify an exclusion from the irrigation measure. This percentage does not include land application of animal waste. However, as part of the Animal Waste Management Regulations, all animal operations that apply liquid waste to the land are required to have a nutrient management plan and implement best management practices. This requires analysis of the soil every two years and

the calibration of land application equipment to ensure that nutrients are being applied at an equal, agronomic rate, as calculated for that individual field and crop.

Enforceable Policies and Mechanisms for Erosion and Sedimentation: In the Administrative Changes for the program, NOAA and EPA agreed to approve “back-up” enforceable policies and mechanisms for state programs if the following is provided:

1. a legal opinion from the attorney general or an attorney representing the agency with jurisdiction for enforcement that such authorities can be used to prevent nonpoint pollution and require management measure implementation, as necessary;
2. a description of the voluntary or incentive-based programs, including the methods for tracking and evaluating those programs, the states will use to encourage implementation of the management measures; and
3. a description of the mechanism or process that links the implementing agency with the enforcement agency and a commitment to use the existing enforcement authorities where necessary.

North Carolina submitted a legal opinion detailing how the state’s water quality standard for turbidity (15A NCAC 2B.0211(k)) can be used to ensure implementation of the erosion and sediment control measure. If sediment leaving a site causes violation of the turbidity standard, the Division of Water Quality (DWQ) can make the determination whether the agricultural activity is using BMPs and the DWQ has the enforcement authority to assess civil penalties and pursue injunctive relief for the turbidity standard violation. Compliance with the turbidity standard is achieved when state-recommended best management practices are implemented. As NOAA and EPA found in the 1998 Conditional Approval Findings, those BMPs are consistent with the 6217(g) management measures. In addition, any source of water pollution that precludes any of the designated uses of the water body is considered to be violating a water quality standard.

A supplemental letter, dated August 22, 2001, from James C. Gulick, Senior Deputy Attorney General, to Gregory J. Thorpe, Ph.D., Acting Director, Division of Water Quality, provides more information on the preventative nature of North Carolina’s nonpoint source authorities. The letter cites the state Constitution, several statutory authorities, and enforcement mechanisms as proof that North Carolina can prevent nonpoint source pollution and require implementation of management measures in the absence of a water quality standards violation. The letter concludes by stating that: “North Carolina has broad authority to prevent and control all nonpoint source pollution in the State, whether such sources cause violation of water quality standards or not, and the State has ample authority to enforce the nonpoint source requirements of Section 6217 of CZARA.”

Regarding element 2 above, NOAA and EPA approved North Carolina’s voluntary or incentive-based programs that manage erosion and sedimentation from agricultural operations in the Conditional Approval Findings (February 23, 1998). Further details on the programs that meet

other agricultural management measures are found above, in this document. The state encourages implementation of the measures through funding and technical assistance. The Agricultural Sediment Initiative (detailed below) has been backed by a grant of \$290,000 from the statewide Nonpoint Source Management Program (319 program). In addition, the Basinwide Planning program (detailed in the Urban Watershed Protection section below) includes actions to reduce sedimentation from agricultural operations.

Regarding element 3 above, as is noted in the legal opinion, the Division of Soil and Water Conservation (DSWC) is the agency responsible for determining whether appropriate and compliant BMPs are in place at agricultural sites and the Division of Water Quality (DWQ) is the agency that determines whether there is a turbidity standard violation (through use of turbidimeters), and is also responsible for pursuing enforcement actions if there is a violation. The linking mechanism for enforcing the standards has been interactions between the two divisions on the Agricultural Sediment Initiative.

In an effort to be more proactive towards protecting water quality, in 1999 the DSWC began a more assertive approach to addressing sediment pollution from agricultural sites by developing the Agricultural Sediment Initiative. The initiative assesses sources of sediment and implements projects aimed specifically at reducing sediment contributions from agricultural operations in watersheds that DWQ, the enforcement agency, has designated impaired because of sediment from agricultural land use.

A key component of the strategy is to conduct a survey or field evaluation of the watershed adjacent to impaired water bodies. These surveys are conducted by the Soil and Water Conservation District and serve the following purposes: to verify (or clarify) the cause of stream sedimentation; to outline the adequacy of actions in place locally that are designed to reduce and manage these agricultural impacts; to recommend actions for the District to take in a stream segment in response to the problems in-stream, on adjacent land, and in remaining watershed; and to estimate the cost of implementing appropriate BMPs.

In early 2000, the Sediment Initiative began with a pilot project that surveyed three of the state's sediment impaired streams. The three districts within which the streams are located have been awarded a grant of approximately \$290,000 from the 319 Incremental Program, to implement recommendations of the surveys. Surveys are currently being conducted for the remaining 30 streams in the state that have been identified as impaired due to sedimentation from agriculture. Four of these streams are located within the 6217 management area.

North Carolina has shown commitment to use its enforcement authorities where necessary in several ways. Agricultural operations in the Neuse and Tar-Pamlico river basins are covered by DWQ regulations that require implementation of BMPs. Although the focus of the regulations is nutrient management, the practices employed by agricultural operators also serve to control erosion and sedimentation. In fact, the state estimates the amount of soil kept from waterways in those basins to measure the success of the strategies. In addition, DWQ has the authority to enforce the turbidity standard throughout the state. DWQ staff from the regional offices routinely consult with DSWC field agents and provide assistance to agricultural operators on

BMP implementation. DWQ and DSWC have also initiated a Memorandum of Agreement regarding enforcement of turbidity standard violations at agricultural sites. This agreement will further enhance what DWQ describes as its “vigorous enforcement of water quality standard violations from agriculture operations.”

This information is sufficient to address the condition calling for a “strategy to implement the agricultural management measures” contained in North Carolina’s conditional approval findings issued by NOAA and EPA on February 23, 1998.

III. URBAN

A. NEW DEVELOPMENT, SITE DEVELOPMENT, and CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL

ORIGINAL FINDING: North Carolina's program includes management measures in conformity with the 6217(g) guidance, except that the program does not include management measures to require an 80 percent total suspended solids (TSS) reduction for new development. The program includes enforceable policies and mechanisms to ensure implementation, except the program does not include enforceable policies and mechanisms for sites disturbing one acre or less for the new development and site development management measures. The State has identified a backup enforceable policy applicable to the erosion and sediment control management measure for sites disturbing one acre or less, but has not demonstrated the ability to ensure implementation throughout the 6217 management area.

CONDITION: Within two years, North Carolina will include in its program management measures in conformity with the 80 percent TSS standard for new development, and enforceable policies and mechanisms to ensure implementation of the new development and site development management measures on sites disturbing one acre or less. For the erosion and sediment control measure, the State will, within one year, develop a strategy (in accordance with Section XIV, page 14) to implement the measure throughout the 6217 management area.

DECISION: North Carolina has satisfied this condition.

RATIONALE: North Carolina's stormwater rules (15A NCAC 02H .1000) require that development activities disturbing more than one acre in coastal counties control runoff. Developers have a number of options to control runoff, including wet detention ponds designed to achieve an 85 percent TSS removal and storage of runoff from a one-inch rainfall from the site above the permanent pool.

In addition to wet detention ponds, the rule allows for other stormwater control options, such as infiltration systems, curb outlet systems, and vegetated filter strips that meet the “by design” TSS reduction standard of the management measure. These systems must be used in combinations. For example, infiltration systems must be used in conjunction with vegetative filter strips and curb outlet systems are limited to low-density developments (which limits the amount of TSS) and must be used in conjunction with grass swales or other vegetated areas (15A NCAC 02H

.1008). Also, alternative stormwater control options that perform at an 85 percent removal of the TSS are allowed. The discharge rate from the system must meet one of the following two requirements:

- 1) the post development discharge rate shall be no larger than the predevelopment discharge rate for the one year, 24-hour storm; or
- 2) the discharge rate following the one-inch design storm shall be such that the runoff volume draws down to the pre-storm design stage within five days, but not less than two days.

This is consistent with the management measure. In addition, the Division of Coastal Management reviews development and stormwater control activities within the 20 coastal counties. The DCM can impose enforcement actions upon violators of development standards.

The Clean Water Responsibility Act of 1997, per the State's submittal, requires the Environmental Management Commission to implement stormwater runoff rules statewide under a continuing program planning process. Priorities are weighted toward the coastal area; they are as follows: 1) Classified shellfish waters; 2) water supply watersheds; 3) outstanding resource waters; 4) high quality waters; and 5) all other waters of the State to the extent that the Commission finds that control of stormwater is needed. This additional authority, in combination with the State's authority to implement stormwater programs in the 20 coastal counties, and for activities in areas draining into Outstanding Resource Waters and High Quality Waters, as well as activities within the Neuse and Tar-Pamlico Basins, provides the basis for comprehensive stormwater management throughout the 6217 management area. North Carolina undertook a stakeholder process to recommend a framework for comprehensive statewide stormwater management throughout the state. North Carolina should include a schedule in the 15-year program implementation strategy for implementing the Clean Water Responsibility Act of 1997 in areas within the 6217 management area where the stormwater management program is not currently being implemented (the program is currently implemented within the 20 coastal counties; this represents all of the 6217 management area except small portions of three counties – Martin County within the Chowan basin; Pitt County within the Tar basin; and Jones County within the White Oak and Neuse basins).

The state also employs the section 401 Certification Program that addresses the issue of site development. The 401 Certification directly addresses the issue of impacting streams and wetlands by requiring mitigation for impacts above certain thresholds (>150 feet of stream, >1 acre of wetland, >1/3 acre of unique wetland). In some cases an EA/EIS is required (e.g., for impacts greater than 500 feet of permanent stream impact).

Regarding NOAA and EPA's finding that North Carolina does not include enforceable policies and mechanisms for sites disturbing one acre or less for the new development and site development management measures, the state has several programs that address development on small sites. Together, these programs are sufficient to meet the condition. The stormwater program's jurisdiction is based on density of development, not the size of the particular disturbed area. Low density development is defined as having an impervious area of less than 12 percent

or is an area planned for single family homes zoned R-1 or greater. Rules for development on low-density sites are designed to reduce runoff velocities from any 10-year storm event (15A NCAC 02H .1008(f), (g)). All other development is deemed high-density and requires at least a wet detention pond.

There are also impervious surface limitations for development within the public trust water and coastal shoreline areas of environmental concern (AEC). The Coastal Shoreline AEC buffer applies to new development regardless of size. The buffer rules apply to all navigable waterways in the 20 coastal counties, including upstream public trust shorelines. However, in the Neuse and Tar-Pamlico basins the DWQ buffer requirements take precedence because they are the more stringent of the two. Within these two basins, the DWQ Nutrient Sensitive Waters rules mandate a 50-foot riparian buffer and other requirements (like stormwater plan requirements for municipalities). These rules address both the new and the site development management measures. They are enforceable rules and the buffer requirements apply regardless of the development size. For urban stormwater, six municipalities and five counties in the Tar-Pamlico basin will be required to develop and implement stormwater control programs that are at least as stringent as a model program to be developed by the state and stakeholders. These programs must require all new development to reduce nitrogen loading by 30 percent from basin average loads for undeveloped lands, and, unlike the Neuse, to hold phosphorus loading to pre-development levels. They must also establish an illicit discharge identification and removal program, identify retrofit sites, and include a public education component. DWQ is responsible for developing an education program that will reach homeowners.

The Environmental Management Commission also has the authority to designate additional Nutrient Sensitive Waters, as needed. As with the Neuse and Tar-Pamlico, these designations may be accompanied by strategies and rules (which can include specific best management practices and apply to agricultural and/or urban areas).

Finally, the land use planning program that is required within the 20 county coastal area includes a “land suitability analysis.” (15A NCAC 07B .0210 (a)) Under the regulations, local governments must analyze the general suitability for the development of undeveloped lands, with consideration given to the following factors: physical limitations for development, watersheds with impaired water quality, fragile areas, and areas with resource potential.

The areas outside of the existing coastal area, but in the 6217 management area, are largely in the Tar-Pamlico or Neuse River basins. Two areas are not. One is in Jones County in the White Oak River watershed that is almost exclusively in the Croatan National Forest. The other is a very small, very rural portion of Martin County (Roanoke River basin). Together, these two areas are not significant, and are not reasonably expected to become significant, either individually or cumulatively.

The North Carolina Coastal Nonpoint Program is not required to include the Construction Site Erosion and Sediment Control Management Measure because the NPDES storm water regulations for industrial activities on construction sites apply nationwide and therefore throughout the North Carolina 6217 management area.

B. WATERSHED PROTECTION and EXISTING DEVELOPMENT

ORIGINAL FINDING: North Carolina's program does not include management measures for watershed protection and existing development in conformity with the 6217 (g) guidance but includes enforceable policies and mechanisms to ensure implementation throughout the 6217 management area.

CONDITION: Within two years, the State will include in its program management measures in conformity with the watershed protection and existing development management measures.

DECISION: North Carolina has satisfied this condition.

RATIONALE: NOAA and EPA found that, while North Carolina's programs implemented certain aspects of the measure, such as avoiding conversion of areas susceptible to erosion, they did not provide for comprehensive watershed protection throughout the management area. Preserving areas that provide water quality benefits and siting of development to protect the natural integrity of water bodies were not fully addressed by these programs. In addition, it was unclear how the State would address opportunities to reduce pollution from existing nonpoint sources and schedule the implementation of appropriate controls.

As detailed in North Carolina's additional information submittal of May 21, 1999, the state has since strengthened measures associated with watershed protection and existing development. Highlighted programs include:

- Basinwide Water Quality Plans, which have been developed on a 5-year cycle and correspond with the NPDES point source permitting schedule. The state has begun the second round of this program, and one change was to emphasize nonpoint source impacts in specific watersheds, and where possible, identify the causes and sources of impairment.
- The Basinwide Planning approach provides the framework for other watershed protection measures. DWQ has established nonpoint source teams in basins around the state to identify existing nonpoint source programs and initiatives, prioritizing waters within the basin for restoration and protection, and developing and implementing management strategies for chosen waters.
- Use Restoration Waters Program, begun in 1998, will target all nonpoint source impaired waters in the state by catalyzing voluntary efforts by stakeholder groups to restore these waters by providing various incentives. Simultaneously, the program will develop a set of mandatory requirements for nonpoint source categories where local effort is lacking.
- The Clean Water Management Trust Fund, which since 1997 has provided approximately \$195 million in grants to local and state agencies and non-profits for projects that restore

and protect state surface waters. Two of the Fund's broad goals are the restoration of degraded waters and protection of unpolluted waters. Thirty-nine nonpoint source-related projects for a total cost of nearly \$45 million have been funded in the 6217 management area, including acquisition of buffers, easements, restoration, and stormwater management.

Between the Trust Fund, the revisions to the Basinwide Planning program, the Use Restoration Waters Program, and the basin wide nonpoint source teams, the state has improved its watershed management programs sufficiently to meet this condition. For example, the Neuse River Basin plan, which received Environmental Management Commission approval in July 2002, has extensive recommendations on forested buffers, nitrogen reductions from agriculture, and other sources. In addition, the North Carolina Wetlands Restoration Program has funded streambank restoration in the Neuse River watershed (consistent with the basinwide plan). Specific descriptions of all projects accomplished under the Neuse Plan and other plans can be found within the plan documents themselves at <http://h2o.enr.state.nc.us/basinwide/>.

C. CONSTRUCTION SITE CHEMICAL CONTROL

ORIGINAL FINDING: North Carolina's program does not include management measures in conformity with the 6217(g) guidance. North Carolina has identified backup enforceable policies and mechanisms to implement the management measure, but has not demonstrated the ability of these authorities to ensure implementation throughout the 6217 management area.

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

DECISION: North Carolina has satisfied this condition.

RATIONALE: The North Carolina Coastal Nonpoint Program is not required to include the Construction Site Erosion and Sediment Control Management Measure because the NPDES storm water regulations for industrial activities on construction sites apply nationwide and therefore throughout the North Carolina 6217 management area. Nonetheless, North Carolina has developed a construction site chemical control manual that meets the intent of the measure. The state also developed English and Spanish language posters to accompany the manual. The manual and poster highlight the importance of construction site chemical and material control, and all materials and activities included in the measure are covered in the materials. The primary method of distributing the manual and poster will be mailing it directly to general contractors and major suppliers in the coastal region rather than simply distributing it through local government offices and regional councils of government (although some of these avenues will still be used). North Carolina generated a mailing list from the state's General Contractors Association and at their suggestion, will include a letter from the DNER Secretary with the

manual (and poster). The letter will encourage managers to review and distribute the materials to site managers and encourage them to use the practices identified.

North Carolina also implements the Oil Pollution and Hazardous Substances Act and Pesticide Control Law. In addition, the Occupational Safety and Health Act of North Carolina is enforced through the state Department of Labor. On-site inspections may be conducted with regard to handling and storage of chemicals and other hazardous substances. These laws are enforceable throughout the state, regardless of location or lot size.

Application of nutrients on construction sites is not regulated under these laws. Nutrient management is accomplished through the state stormwater management program, erosion and sedimentation program, and nutrient sensitive waters strategies detailed in Section III.A. above.

D. NEW and OPERATING ONSITE DISPOSAL SYSTEMS (OSDS)

ORIGINAL FINDING: North Carolina's program includes management measures in conformity with the 6217(g) guidance, except it does not provide for (1) adequate separation distances between OSDS system components and groundwater that is closely hydrologically connected to surface waters, (2) measures for inspection and maintenance of OSDS serving single family residences, and (3) denitrifying systems where nitrogen-limited surface waters may be adversely affected by excess nitrogen loadings from OSDS. North Carolina's program includes enforceable policies and mechanisms to ensure implementation of the measures throughout the 6217 management area.

CONDITION: Within two years, North Carolina will include in its program management measures in conformity with the 6217 (g) guidance to provide (1) adequate separation distances between OSDS system components and groundwater that is closely hydrologically connected to surface waters, (2) measures for inspection and maintenance of OSDS serving single family residences, and (3) denitrifying systems where nitrogen-limited surface waters may be adversely affected by excess nitrogen loadings from OSDS.

DECISION: North Carolina has satisfied this condition.

RATIONALE:

(1) The rules governing OSDS in North Carolina require a minimum of 18 inches of separation between the trench bottom and any soil wetness condition for gravity flow systems under most circumstances. A 12-inch separation distance may only be used on Class I Soils (sand and loamy sand) when pressure distribution is used. In addition, the soil wetness condition criteria are more stringent than just a water table evaluation or observation at the time of the comprehensive site evaluation.

For mass drain fields (greater than 3000 gpd) a minimum separation of 24 inches based on a mounding or linear loading analysis is required depending on landscape position or topography. The OSDS rules have also approved advanced wastewater pretreatment systems (beyond

primary) that include three types of sand filter treatment, aerobic treatment units, and peat bio-filters for improved wastewater treatment on sites that are not hydraulically limited. Finally, North Carolina was the first state to require effluent filters on all new systems permitted after January 1, 1999 for the enhancement of effluent quality (mainly TSS) and pump out of the septic tank.

When permitting new OSDS, North Carolina inspectors use a comprehensive worksheet to ascertain site suitability. The inspectors perform the necessary tests on-site as they fill out the worksheet, which gives them accurate information on soil type, wetness, and other conditions, and allows them to make informed decisions on necessary separation distance between OSDS system components and groundwater that is closely hydrologically connected to surface waters.

North Carolina rules at 15A NCAC 18A .1939 require that soil suitability “be evaluated at the site by borings or other means of excavation to at least 48 inches or to an unsuitable characteristic and a determination shall be made as to the suitability of the soil to treat and absorb septic tank effluent. Applicants may be required to dig pits when necessary for proper evaluation of the soil at the site.” The routine use of the site suitability worksheet and the requirement for on-site borings or other means of excavation gives North Carolina the ability to ensure that OSDS components are adequately sited away from groundwater that is closely hydrologically connected to surface waters.

(2) North Carolina has several programs which, taken together, ensure that OSDS are inspected at a frequency adequate to ensure whether the systems are failing. North Carolina has documented how these programs, taken together, will accomplish inspections of more than 90 percent of the approximately 193,000 OSDSs throughout the 6217 management area over a 15-year period. Several programs are regulatory: rules require inspections of all OSDS larger than single family (Types IIIb, IV, V, and VI) at least every five years (15A NCAC 18A .1961). Also, at least 95 percent of the most critical systems for coastal water quality, those along the estuarine and coastal shoreline, are assessed from the road and shore every year and door to door every three years (15A NCAC 18A.0903). Further details on this program are included in item (3) below. In addition, General Statutes (NC GS 130A-336, 337) require a site inspection for all malfunctioning OSD requiring repairs and any OSDS proposed for expansion (increase in flow or waste strength). Finally, relocations of facilities require an inspection, as do the location of a manufactured home in a mobile home park (NC GS 130A-336, 337). A full description of these and other voluntary programs that allow North Carolina to meet the 90 percent inspection goal are included below:

1. Comprehensive site/soil evaluation, system design review and layout, and installation inspection is required (including appropriate permits) for:

- All expansion/additions to dwelling units or other facilities with existing OSDS,
- All proposed increases in the design wastewater flow with existing OSDS, and
- All proposed increases in wastewater strength with existing OSDS.

2. Post-installation inspections and evaluations of OSDS (including appropriate permits) by professional environmental health specialists are required for:

- All complaints reported to the State or Local Health Department,
- All OSDS requiring repairs (this includes a comprehensive failure analysis),
- All relocations of a manufactured home in a mobile home park (this requires all systems serving the park to be inspected prior to issuing a written authorization),
- All reconnections to existing onsite wastewater systems,
- All OSDS required to be operated and maintained by a certified subsurface system operator, and
- All systems located adjacent to or near shellfishing waters.

3. The Shellfish Sanitation and Recreational Water Quality program monitors 3,913 miles of estuarine shoreline and 320 miles of ocean shoreline. The program routinely samples and monitors shellfish harvesting areas, including inspecting wastewater discharges. Staff members inspect all onsite wastewater systems once every year via drive-through or shoreline observation, and every three years door to door. Approximately 5,000 to 6,000 onsite systems per year are surveyed door to door in this program. The systems that are inspected are next to high-risk surface waters (classified as SA-Shellfishing). Owners of OSDS found to be malfunctioning or in violation of applicable laws, rules, or permit conditions are given a Notice of Violation and are reported to the local health departments for enforcement. This program prepares a comprehensive report of both shoreline survey information and surface water quality. Overall, the surveys have shown that failure rates have been about three to four percent.

4. The Division of Waste Management oversees the septage management firms and septage disposal in North Carolina. Currently, 61 septage management firms provide services in the CAMA counties, and when in the field, they report malfunctioning OSDS to Local Health Departments. Recently enacted legislation (HB 1019) requires continuing training and education to maintain a permit as a septage management firm. Septage firms must maintain septage collection and disposal inventory records at their place of business.

5. The primary agencies that site, permit, and oversee onsite wastewater systems are the county (local) health departments. Approximately 90 dedicated environmental health specialists (EHS) serve the CAMA counties. Their comprehensive on-site wastewater duties include: Site Evaluations; Permitting; Inspections; Repair Analysis; Complaint Investigations; Consultative Site Visits, Education, and Enforcement. This results in thousands of site visits and inspections annually. All 20 Coastal CAMA counties have staff dedicated to conducting required inspections of Type IIIb systems and above. North Carolina requires local health departments to inspect some onsite septic systems as identified in the state's OSDS rules (Table V(a) - 15NCAC 18A .1961(j)). These inspection requirements enable the local health department to concentrate their limited resources on what the state considers "higher risk" septic systems.

6. North Carolina rules also require maintenance of all ground absorption sewage treatment and disposal systems (this would include conventional systems at single family residences) by the person owning or controlling the property upon which the ground absorption sewer treatment

and disposal system is installed (15NCAC 18A .1961(a)). North Carolina rules also require that systems be checked and the contents of the on-site system pumped “whenever the solids level is found to be more than 1/3 of the liquid depth in any compartment” (15NCAC 18A .1961(a)(2)). This includes conventional systems at single-family residences.

7. State grant resources available through the Clean Water Management Trust Fund (CWMTF) have also been used to finance countywide straight pipe elimination programs, and the installation of sewerage systems in communities dependent upon septic systems. One of the purposes of the CWMTF is to "repair/eliminate failing septic tank systems, to eliminate illegal drainage connections, and to expand waste treatment systems if the system is being expanded as a remedy to eliminate failing septic tank systems or illegal drainage connections" (CWMTF website at: www.cwmtf.net/guide.html). Projects must meet this or other criteria in order to receive funding.

The CWMTF has financed a number of projects that involve either installation of wastewater collection systems or the financing of county revolving fund programs to replace or improve existing septic systems in the coastal area. Most applicable to the onsite disposal system management measure is the \$1 million grant (part of a \$1.46 million project) to the Pasquotank, Perquimans, Camden and Chowan (PPCC) District Health Department's Public Management Entity (PME). The PPCC PME established a low interest revolving loan fund to assist low to moderate income level residents in the repair or maintenance of septic systems and subdivision drainage facilities. The nine counties eligible for the program are in the northeast portion of the state (Chowan and Pasquotank River basins). Requirements to qualify, besides economic, are that the site be: within a priority subwatershed as identified by the North Carolina Wetlands Restoration Program; within 0.5 miles of the Atlantic Ocean or estuaries or freshwater resource of any classification; or within a designated Water Supply Watershed. Loans of up to \$5,000 can be approved with flexible repayment schedules based upon income. The CWMTF also funded a revolving loan fund in Craven County similar to the PPCC District Health Department Program. The CWMTF is statewide and currently well funded.

8. North Carolina has several additional projects underway to ensure adequate inspections and maintenance of OSDs. The state surveys local governments through the Construction Grants and Loan (CG&L) Program. This survey occurs every four years to determine wastewater treatment needs. Where failing OSDs are a problem, additional points for CG&L funding can be given for requests to connect to a central sewer system.

9. North Carolina is also pursuing a biological tracking method that will assist with determining whether OSDs are failing. The state, through the EPA Clean Water Act 319 Grant Program has tentatively funded a three-year project to establish a Bacterial Source Tracking (BST) laboratory in the coastal town of Morehead City. The BST lab would use molecular biologic techniques to “fingerprint” the source of fecal coliform bacteria found in a water body. Jumping Run Creek, a stream located in the White Oak River basin, has been identified as a case study for the initial BST studies in this project. The case study would provide information for development of a BST database. Cooperators in the project include NCSU, NC DENR – Shellfish Sanitation Section and Division of Water Quality, Duke Marine Laboratory, and the National Ocean

Service laboratory in Charleston, South Carolina. Future BST will enable a quicker determination of bacterial sources, which could include malfunctioning on-site wastewater systems.

10. North Carolina also manages OSDS through the adoption of On-Site/Decentralized Wastewater Management Plans (Decentralized Plan) by local governments. On-site or decentralized plans emphasize the need for life-cycle management (cradle-to-grave) of the entire range of decentralized wastewater systems. A Decentralized Plan includes proper OSDS inspection and maintenance. The state is sponsoring two projects through the 319 Grant Program to increase the adoption of these plans.

The first project is being undertaken by North Carolina State University. It includes the development of an On-Site/Decentralized Wastewater Management Program for Craven County. The plan will take into consideration risks of various systems and risks of impacts to environmental resources.

The second project aims to make use of the draft On-Site/Decentralized Wastewater Management Manual developed by DEH's On-site Wastewater Section (OSWS). The manual stresses the benefits of comprehensive management in terms of protecting a community's environmental, natural and economic resources. The intent of the manual is to encourage local governments to voluntarily adopt a Public Management Entity (PME) and implement the life-cycle management of *all* on-site systems within their jurisdictions. DEH will begin a formal outreach to North Carolina's communities to establish PME's and adopt Decentralized Plans. The Manual will be a valuable tool in these endeavors. The initial focus of the outreach will be in the 6217 management area, which will help the state to address NOAA/EPA's concerns in reference to the need for on-site wastewater systems management after the operation permit is issued.

11. The state is also currently addressing the management measures through educational efforts. The DEH OSWS already has and distributes educational material including on-site system maintenance file folders, fact sheets, and extensive web information for homeowners. The OSWS is also developing a homeowner's manual that will contain information about OSDS maintenance and performance. The manual will also be available for renters, developers, and counties – at no cost. It will also include a Sink Hanger and a No Flush Hanger that will educate homeowners about items that should not be placed down the drain. The Section also conducts extensive workshops, lectures, and conferences at statewide, regional, and local meetings of North Carolina Environmental Health Specialists (EHS). Educational materials are provided at these functions for attendees. The OSWS also provides training for EHS staff on proper site evaluation, etc. of onsite systems in the counties.

12. Finally, the continued use and development of large onsite wastewater systems (>3,000 gals/day) in North Carolina makes it clear that effective tracking, monitoring, and management is vital to make sound planning decisions and to protect groundwater and surface water resources. Across the state there are approximately 2,000 of these systems, 895 of which are in the 20 coastal counties. The protection of environmentally sensitive areas and human health is the

focus of DEH's charge in onsite wastewater treatment. To address this, DEH will develop a statewide Information Management System for large Onsite Systems, maps of large onsite systems across the state. Additionally this will aid the state in carrying out its large system onsite responsibilities and provide tools for permit tracking for the state and county public health departments. The GIS maps will be available on the Web, and will provide valuable information for analyzing nonpoint source contributions in local and regional watersheds from large OSDS. The information system will enable the state to track and monitor these higher risk systems more effectively.

The state has also pursued legislative action to address the proper inspection and maintenance of OSDS. In an effort to get more directly at the issue of inspection and maintenance, the Division of Environmental Health (DEH) introduced a bill into the 2000 General Assembly (GA) entitled "The Residential Wastewater Disclosure Act" that would require a disclosure statement regarding any on-site system at the point of sale (or re-sale). This would have included disclosure of the septic system's maintenance history. Although the bill was not passed, it is still considered a potential tool for addressing the issue and the state will continue to pursue this option. Further, the OSWS program continues to work with lending institutions to encourage pre-sale inspections for existing systems by private system evaluators.

Introduction of the above bill was prompted from recommendations included in a report prepared by the DEH and submitted to the North Carolina Commission for Health Services in March 2000. The report, entitled "Report On The Proper Maintenance of Septic Tanks Systems In Accordance With Section 13.5 of HB 1160 (Clean Water Act Of 1999)," resulted from a General Assembly mandate to study the issues related to the proper maintenance of septic tank systems. The report recommended the following measures to prevent on-site wastewater system failure: accurate location of on-site wastewater systems; notification for on-site wastewater system maintenance; creation of a certification program for installer/contractors of on-site wastewater systems; inspection and disclosure statement for on-site wastewater systems; reporting of on-site wastewater systems damaged by excavation; comprehensive plan for all wastes; and funding for local health departments.

The DENR OSWS also proposes to further investigate the needs for additional onsite inspection programs and initiating more sophisticated tracking programs in the CAMA counties. This would be accomplished first by conducting a more detailed analysis of the onsite inspections already in place in up to three CAMA counties, while continuing current activities addressing the inspection requirements. This would be followed by a pilot project in one CAMA county which would further assess, enhance, and expand inspection activities in one CAMA county and would involve an assessment of needs and putting into place a computer based tracking program for all onsite systems. This would permit data entry of all onsite systems, information about type, special features, and installation, automatic mapping and location, and management enhancement capabilities such as automatic notification for pumping and inspections. The demonstration results would provide a basis for the tracking and management of onsite systems for all coastal counties and ultimately throughout the state.

The project would span three years, with a goal of establishing a model inspection and tracking program for onsite management in the CAMA counties, beginning with those directly adjacent to the coastlines. The estimated costs for the project would depend on the size of the county chosen. This project would be funded from Clean Water Act section 319 funds. NOAA and EPA encourage North Carolina to pursue this pilot project and include it in the 15-year coastal nonpoint program implementation strategy.

In summary, measures taken to enhance the operation, maintenance, and repairs of OSDS include:

- Mandatory requirement for two compartment septic tanks.
- Mandatory requirement for all newly installed septic tanks to have an effluent filter.
- Mandatory requirement for removal of septage when the contents exceed 1/3 the liquid capacity of the septic tank.
- Mandatory inspections of OSDS near or adjacent to shellfishing waters.
- Mandatory certified OSDS operator requirement for systems determined to be high risk with local health department surveillance including several systems with advanced pre-treatment or disposal components.
- Mandatory failure analysis and repair permits for systems found to be malfunctioning.
- Voluntary owner education including: Public Service Announcements, owners folders and brochures, Train the Trainer Programs, and OSDS web site.
- The establishment of a toll free line to report systems problems within the State with incentives to self-report.
- The continuation of coastal shoreline surveys conducted by the Shellfish Sanitation and Recreational Water Quality Program, including a comprehensive survey of OSDS every three years, updated annually.
- Continued efforts to support local entities in providing operation, maintenance, and surveillance of OSDS through agency guidance documents, training and education.

NOAA and EPA commend North Carolina for these extensive efforts that collectively ensure that existing OSDS are inspected at a frequency adequate to ensure whether the systems are failing. We encourage DNER to continue working with the General Assembly on initiatives that require legislative approval and to implement those programs that can be done without legislative action. The latter activities should be included in the state's 15-year program implementation strategy.

(3) The need for additional denitrification for onsite wastewater systems in nutrient sensitive coastal waters is not a significant issue in North Carolina. Based on the 2002 section 303(d) listing of impaired waters, no nutrient sensitive waters or other waters in North Carolina are identified as impaired from nutrients from onsite wastewater systems. In addition, current information indicates that significant denitrification occurs in the subsurface fate and transport of nitrates; therefore onsite systems are not major contributors of nitrogen to surface waters in North Carolina. As illustrated by the denitrification data submitted by North Carolina, denitrification often occurs within 25 feet from the septic system. The data from a study

conducted in North Carolina shows that even in sandy coastal plains, denitrification rates are significant (as reported by Cogger, et al.).

North Carolina has identified the Neuse and Tar-Pamlico basins as nitrogen-limited basins where problems have warranted "Nutrient Sensitive Waters" classification. Even though OSDS have not been identified as contributing to nutrient impairment, rules for these basins prohibit new ground absorption OSDS within a 50-foot buffer. The rules are the product of a legislatively mandated stakeholder committee. These buffers are more restrictive than the standard statewide OSDS siting criteria. Within the Neuse and Tar-Pamlico basins, the setback is measured from the most landward limit of the normal high water level, normal water level, or the landward limit of coastal wetlands - whichever is more restrictive. For perennial streams outside the 20 CAMA counties, buffers are measured from the top of the bank or the rooted herbaceous vegetation. This differs from the statewide standards in the way the setbacks are measured. The statewide setbacks are measured from the mean high water mark rather than the landward limit of the wetland as in the buffer requirement, which is more restrictive. Additionally, the buffer rules do not allow any component of any septic system in the buffer, whereas in other areas, there is an allowance for "innovative" systems or parts of these systems within the setback area.

E. ROADS, HIGHWAYS, AND BRIDGES

ORIGINAL FINDING: North Carolina's program includes management measures for roads, highways, and bridges in conformity with the 6217(g) guidance, except for the runoff systems management measure, for which the State is currently in the process of developing a program. North Carolina's program includes enforceable policies and mechanisms that ensure implementation of the management measures.

CONDITION: Within three years, North Carolina will include in its program management measures for runoff systems in conformity with the 6217 (g) guidance.

DECISION: North Carolina has satisfied this condition.

RATIONALE: North Carolina submitted a NPDES permit issued to the North Carolina Department of Transportation (DOT), which requires the Department to monitor, evaluate, and improve the quality of runoff, as well as identify and conduct retrofit projects. Specifically, the DOT must: inventory stormwater outfalls to sensitive waters; target and implement retrofit best management practices in priority areas; in conjunction with DWQ, develop and implement a comprehensive analytical monitoring program for discharge characterization and BMP evaluation; and review DOT procedures and practices and make changes to minimize stormwater impacts.

The DOT has submitted annual reports to DWQ detailing the implementation of the permit. The report covering the period from July 1, 1999 to June 30, 2000 describes the process the state is using to select retrofit projects (initially one in each of the 14 DOT divisions, and ultimately 42 total projects). DOT also drafted a Best Management Practice Toolbox for roadways, ferry terminals, and maintenance facilities.

IV. MARINAS AND RECREATIONAL BOATING

ORIGINAL FINDING: North Carolina's program includes management measures in conformity with the 6217(g) guidance, except for fueling station design. The program includes enforceable policies and mechanisms to ensure implementation, except the State has not established authority to implement the boat operation measure.

CONDITION: Within two years, the State will include in its program management measures for fueling station design in conformity with the 6217 (g) guidance and enforceable policies and mechanisms to implement the boat operation management measure.

DECISION: North Carolina has satisfied this condition.

RATIONALE: North Carolina Division of Coastal Management has developed a Clean Marinas Program modeled after the Clean Marina initiatives underway in Maryland, Florida, and South Carolina. The Division of Coastal Management recruited several organizations as co-sponsors of the program: the North Carolina Marine Trades Services, North Carolina Sea Grant, and North Carolina Big Sweep. The U.S. Coast Guard Auxiliary has agreed to participate in the verification of marina performance. The criteria for judging “clean” marinas are based primarily on the 6217(g) management measures, including fueling station design. The “checklist” for designing fueling stations calls for locating and designing the stations to contain spills to a limited area; designing a spill contingency plan; designing containment around fueling stations and fuel storage areas; having adequate spill containment and clean up equipment on site (booms, absorbent pads, gloves etc); using automatic shutoffs on fuel dispensers; and promoting the use of oil absorbing material in bilges. Therefore, the fueling station design condition has been met.

The Clean Marinas Program not only addresses the fueling station management measure, but also will increase operator awareness and improve compliance with many of the other marina management measures. The Marine Trade Services estimates that there are approximately 205 coastal marinas in North Carolina. Of these, approximately 100 have fueling stations.

Regarding the boat operation measure, the Fisheries Reform Act (FRA) provides an avenue for protecting shallow-water habitats (NC GS 143B-279.8). The FRA mandates that the Division of Marine Fisheries (DMF), in cooperation with DCM and DWQ, develop and implement the Coastal Habitat Protection Plan (CHPP) program. The program identifies habitat that either directly or indirectly supports marine fish species, and will make recommendations for restoration or protection of these areas. Seven habitat types, including shallow flats, submerged aquatic vegetation, and wetlands will be described and evaluated. A total of eleven plans will be prepared for the identified management units. The first two plans scheduled for approval are for the Chowan River basin and an area called the Coastal Oceans (includes beaches, shoreline and ocean waters along the entire length and extends three miles out to sea).

The FRA states that after each CHPP is approved, the Coastal Resources Commission (CRC), Environmental Management Commission (EMC), and Marine Fisheries Commission (MFC) are to carry out their “powers and duties . . . to the maximum extent practicable” in accordance with the plan, and are to adopt rules to implement the plans. This provides sufficient enforceable authority to establish no-wake zones or otherwise restrict boating activities where necessary to decrease turbidity and physical destruction of shallow-water habitats.

V. HYDROMODIFICATION

ORIGINAL FINDING: North Carolina's program includes management measures in conformity with the 6217(g) guidance, except that the program does not include management measures for chemical and pollutant control at dams and does not include a process to identify and develop strategies to solve existing nonpoint source problems caused by streambank and shoreline erosion that do not come up for review under existing permit authorities. The program includes enforceable policies and mechanisms to ensure implementation of the management measures.

CONDITION: Within three years, North Carolina will include in its program management measures in conformity with the chemical and pollutant control management measure for dams, and streambank and shoreline erosion in conformity with the 6217 (g) guidance.

DECISION: North Carolina has satisfied this condition.

RATIONALE: NOAA and EPA’s findings indicated that the State did not have a process to identify and develop strategies to solve existing nonpoint source problems caused by streambank and shoreline erosion that do not come up for review under existing permit authorities. Programs detailed above in the watershed protection and existing development section are sufficient to meet this condition. Specifically, the Basinwide Planning process coupled with the nonpoint source teams established by DWQ allows government officials and citizens the opportunity to identify priority erosion problems independent of permit reviews. The Clean Water Management Trust Fund contributes millions of dollars to correcting these and other water quality problems.

The North Carolina Coastal Nonpoint Program is not required to include the Chemical and Pollutant Control for Dams Management Measure because the NPDES storm water regulations for industrial activities on construction sites apply nationwide and therefore throughout the North Carolina 6217 management area.

VI. WETLANDS, RIPARIAN AREAS AND VEGETATED TREATMENT SYSTEMS

ORIGINAL FINDING: North Carolina's program includes management measures in conformity with the 6217(g) guidance and enforceable policies and mechanisms for the protection of coastal wetlands and riparian areas in the State’s designated Areas of

Environmental Concern. North Carolina's program does not include enforceable policies and mechanisms to ensure implementation of the management measure for the protection of wetlands and riparian areas throughout the 6217 management area, i.e., outside of the designated Areas of Environmental Concern.

CONDITION: Within three years, North Carolina will include in its program enforceable policies and mechanisms to ensure implementation of the management measures for wetlands, other than those identified as Areas of Environmental Concern under the State's Coastal Area Management Act, and riparian areas throughout the 6217 management area.

DECISION: North Carolina has satisfied this condition.

RATIONALE: Since submitting its program document in 1995, North Carolina has undertaken several activities to ensure implementation of the management measures for wetlands in areas other than those identified as Areas of Environmental Concern under CAMA, and riparian areas throughout the 6217 management area. In 1996 the Environmental Management Commission amended the state water quality standards to improve wetlands protection for all tidal and nontidal wetlands statewide. The state also developed and implemented a wetlands draining policy in March 1999 that effectively outlines how drainage activities will be regulated and enforced to ensure that wetland water quality standards are maintained.

These enforceable policies and mechanisms work in concert with several other wetlands programs. The Wetlands Conservation Plan for the North Carolina coastal area provides detailed wetland information to local, state, and federal governments, businesses, non-profit organizations, and the general public, so they can make better resource management decisions. In addition, the state General Assembly passed the North Carolina Wetland Restoration Program in 1996, which manages wetlands mitigation statewide. Developers are required to mitigate at a ratio of at least 2:1, and in the same sub-basin or basin where the wetland damage occurred, when possible. This allows the state to restore previously degraded wetlands that serve a significant nonpoint source abatement function. In addition, the programs listed under the watershed protection and existing development condition contribute to protecting wetlands and riparian areas that serve a significant nonpoint source abatement function.