



# Antidegradation for Activities Contributing Nonpoint Source Pollution to Impaired Waters

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Maintaining Water Quality Through Stormwater Controls



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# **Antidegradation for Activities Contributing Nonpoint Source Pollution to Impaired Waters - Maintaining Water Quality Through Stormwater Controls**

## **Purpose**

This document will provide direction to the South Carolina Department of Health and Environmental Control in ensuring that the Antidegradation Rules are implemented for activities which may contribute nonpoint source pollution to adjacent waterbodies. It is specifically intended to ensure that no new activities will further degrade waterbodies which are not presently meeting water quality standards. The Department's regulatory involvement may occur through any program but will primarily occur through Stormwater Permitting, Section 401 Water Quality Certification, Critical Area Permitting, Coastal Zone Consistency Certification, and State Navigable Waters Permitting.

## **Problem Identification**

Every two years, the Department is required by Section 303(d) of the Clean Water Act to identify waterbodies which are not meeting water quality standards despite implementation of technology-based controls. This listing of impaired waters identifies each waterbody by name, monitoring station number, hydrologic unit, and basin. The impaired use and the parameter not meeting standards and, therefore, causing the impairment are also identified for each waterbody.

The Department's document, *Antidegradation Implementation for Water Quality Protection in South Carolina*, which describes implementation of the Antidegradation Rules of Regulation 61-68, *Water Classifications and Standards*, states: "when the available assimilative capacity of a waterbody is not sufficient to ensure maintenance of water quality standards for a parameter of concern with an additional load to the waterbody, then the Department will not allow a permitted net increase of loading for the parameter of concern or pollutants affecting the parameter of concern. This no net increase will be achieved by the reallocation of existing total loads(s) or by meeting the applicable water quality standard(s) at the end-of-pipe. Until such time that a TMDL is developed for the parameter of concern for the waterbody, no discharge will be allowed to cause or contribute to further degradation of the waterbody." This section of the Antidegradation Rules is applicable to all waters to protect existing uses, including those which are impaired. Other sections of the Antidegradation Rules pertain to high quality waters and outstanding resource waters.

The Department implements the Antidegradation Rules when issuing NPDES permits for point sources into impaired waters. The Antidegradation Rules apply to nonpoint source pollution as well. Many activities contributing to nonpoint source pollution are controlled with voluntary measures. The Department implements permitting or certification programs for some of these activities and has the opportunity to ensure compliance with the Antidegradation Rules. The activities of primary concern are land development projects which are immediately adjacent to and discharge runoff or stormwater into impaired waters.

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### **Applicability**

The Department may be involved in permitting or certification of land development projects through Stormwater Permitting, Section 401 Water Quality Certification, or Coastal Zone Consistency Certification. Large scale development projects, those with more than 25 acres of disturbed land which have stormwater discharges directly into an impaired waterbody via structures or ditches, have the ability to further degrade the quality of that waterbody. Therefore, for these projects, the Department must have assurance that stormwater runoff from the site will not cause or contribute to further degradation of the waterbody. Additionally, there may be certain projects adjacent to some ecologically important or sensitive waters with disturbance of less than 25 acres which will require assurance that water quality will not be further degraded. The concern for water quality degradation pertains not only to runoff during construction, but also after the project is fully built-out.

### **Necessary Demonstration**

Department staff first must determine whether runoff from the proposed activity is expected to contain pollutants which are already causing impairment of the adjacent waterbody. This will vary from project to project. If stormwater runoff from the site will contribute pollutants which are already the cause of water quality impairment, the applicant must provide assurance to the Department that this project will not add further to the impairment. We believe this assurance can be provided with a demonstration of the efficiencies of a combination of best management practices (BMPs) including natural wetlands and riparian buffers. In some circumstances, it may be necessary to employ commercial stormwater treatment systems to complete this demonstration satisfactorily. BMPs adequate to protect water quality after development must remain in place after construction is completed. There is no specific methodology which must be followed; however, the demonstration must show that the BMPs to be installed will ensure that runoff from this site will not cause or contribute to further degradation of the waterbody.

For pollutants causing impairment for which the Department has adopted numeric water quality standards (*e.g.* fecal coliform, pH, metals), this demonstration should show that constituents in runoff from the site after project development will not exceed the applicable in-stream water quality standard. Any runoff leaving the last BMP should have water quality equal to or better than the in-stream standard. This demonstration ensures runoff will not cause or contribute to the present water quality standard violation.

The demonstration is different when the identified cause of impairment is due to a violation of a water quality standard which is not a pollutant itself but is affected by a pollutant which can be regulated (*e.g.* dissolved oxygen as affected by biochemical oxygen demand). In these cases, a reasonable approach to demonstrate that runoff will not further degrade the adjacent waterbody is to show that

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the load of that particular pollutant into the adjacent waterbody after development does not exceed the load prior to development. This ensures there will be no net increase of loading of that particular pollutant and no further lowering of the water quality standard.

Typically this demonstration will not require any water quality sampling. However, for some projects, it may be necessary for the applicant to collect monitoring data to confirm the conclusions of the demonstration. Information on topography, land use, and estimates of runoff of these constituents from current land use and post development land uses will be necessary.

### **Total Maximum Daily Load (TMDL) Development**

A TMDL is the total amount of a pollutant a waterbody can receive from all sources and still meet water quality standards. For some waterbodies, the Department will develop a TMDL that includes recommended limits or loads for both point sources and nonpoint sources. For other waterbodies, the identified load is only from nonpoint sources and in those cases the TMDL would not include a contribution from point sources.

In other circumstances, the Department may develop a TMDL for a waterbody which recommends limits for point sources only. Typically in these cases, background data used for the wasteload model development would include nonpoint source contributions. The water quality model may show that the water quality standards will be met with additional controls on the point sources only.

### **Summary**

Implementing the approach described in this document for new, large nonpoint sources will help ensure that water quality will not be further degraded. However, this approach is suitable only until the TMDL is developed. Once a TMDL identifies a load attributable to nonpoint sources, the TMDL must be implemented.