Appendix IV

303(d) Listing
and
Reporting Methodology

Integrated 305(b) and 303(d) Report Summary

The *North Carolina Water Quality Assessment and Impaired Waters List* is an integrated report that includes both the 305(b) and 303(d) reports of previous years. The *305(b) Report* is compiled biennially to update the assessment of water quality in North Carolina and to meet the Section 305(b) reporting requirement of the Clean Water Act. The 305(b) reports present how well waters support designated uses (e.g., swimming, aquatic life support, water supply), as well as likely causes (e.g., sediment, nutrients) and potential sources of impairment. The term "Use Support" refers to the process mandated by 305(b). The *303(d) List* is a comprehensive public accounting of all impaired waterbodies that is derived from the 305(b) Report/Use Support. An impaired waterbody is one that does not meet water quality uses, such as water supply, fishing or propagation of aquatic life. Best professional judgement along with numeric and narrative standards criteria and anti-degradation requirements defined in 40 CFR 131 are considered when evaluating the ability of a waterbody to serve its uses.

Section 303(d) of the federal Clean Water Act (CWA) which Congress enacted in 1972 requires States, Territories and authorized Tribes to identify and establish a priority ranking for waterbodies for which technology-based effluent limitations required by Section 301 are not stringent enough to attain and maintain applicable water quality standards, establish total maximum daily loads (TMDLs) for the pollutants causing impairment in those waterbodies, and submit, from time to time, the list of impaired waterbodies and TMDLs to the US Environmental Protection Agency (EPA). Current federal rules require states to submit 303(d) lists biennially, by April 1st of every even numbered year. For 2002, EPA delayed the submittal until October 1, 2002 (EPA, 2001a). EPA is required to approve or disapprove the state-developed 303(d) list within 30 days. For each water quality limited segment impaired by a pollutant and identified in the 303(d) list, a Total Maximum Daily Load (TMDL) must be developed. TMDLs are not required for waters impaired by pollution.

North Carolina submitted a combined 305(b) and 303(d) Integrated Report to EPA on October 2, 2002. The Integrated Report includes descriptions of monitoring programs, the use support methodology, and the impaired waters list. New guidance from EPA places all waterbody assessment units, or segments, into one unique assessment category (EPA, 2001b). Although EPA specifies five unique assessment categories, North Carolina elects to use seven categories in order to maintain continuity with the 2000 North Carolina 303(d) list. Each category is described in detail below:

> **Category 1: Attaining the water quality standard and no use is threatened**. This category consists of those waters where all applicable use support categories are rated "Fully Supporting". Data and information are available to support a determination that the water quality standards are attained and no use is threatened. Future monitoring data will be used to determine if the water quality standard continues to be attained.
>
> **Category 2: Attaining some of the designated uses; no use is threatened; and insufficient or no data and information are available to determine if the remaining uses are attained or threatened**. This category consists of those waters where at least one of the applicable use support categories are rated "Fully Supporting" and the other use support categories are rated "Not Rated". Also included in this category are waters where at least one of the applicable use support categories, except Fish Consumption,

are rated "Fully Supporting"; the remaining applicable use support categories, except Fish Consumption, are rated "Not Rated"; and the Fish Consumption category is rated "Partially Supporting-Evaluated". Data and information are available to support a determination that some, but not all, uses are attained. Attainment status of the remaining uses is unknown because there are insufficient or no data or information. Future monitoring data will be used to determine if the uses previously found to be in attainment remain in attainment, and to determine the attainment status of those uses for which data and information were previously insufficient to make a determination.

Category 3: Insufficient or no data and information to determine if any designated use is attained. This category consists of those waters where all applicable use support categories, except Fish Consumption, are rated "Not Rated", and the Fish Consumption category is rated "Partially Supporting-Evaluated". Measured data or information to support an attainment determination for any use are not available. Supplementary data and information, or future monitoring, will be required to assess the attainment status.

Category 4: Impaired or threatened for one or more designated uses but does not require the development of a TMDL. This category contains three distinct sub-categories:

Category 4a: TMDL has been completed. This category consists of those waters for which EPA has approved or established a TMDL and water quality standards have not yet been achieved. Monitoring data will be considered when evaluating Category 4a waterbodies for potential delisting.

Category 4b: Other pollution control requirements are reasonably expected to result in the attainment of the water quality standard in the near future. This category consists of those waters for which TMDLs will not be attempted because other required regulatory controls (e.g., NPDES permit limits, Stormwater Program rules, etc.) are expected to attain water quality standards by the next regularly scheduled listing cycle. Future monitoring will be used to verify that the water quality standard is attained as expected.

Category 4c: Impairment is not caused by a pollutant. This category consists of waters that are impaired by pollution, not by a pollutant. EPA defines pollution as "The man-made or man-induced alteration of the chemical, physical, biological and radiological integrity of the water." EPA believes that in situations where the impairment is not caused by a pollutant, a TMDL is generally not the appropriate solution to the problem. Future monitoring will be used to confirm that there continues to be no pollutant-caused impairment and to support water quality management actions necessary to address the cause(s) of the impairment.

Category 5: Impaired for one or more designated uses by a pollutant(s) and requires a TMDL. This category consists of those waters that are impaired by a pollutant and the proper technical conditions exist to develop TMDLs. As defined by the EPA, the term pollutant means "dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive

materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into the water." When more than one pollutant is associated with the impairment of a single waterbody in this category, the water will remain in Category 5 until TMDLs for all listed pollutants have been completed and approved by the EPA.

Category 6: Impaired based on biological data. This category consists of waters historically referred to as "biologically impaired" waterbodies; these waterbodies have no identified cause(s) of impairment although aquatic life impacts have been documented. Identification of the cause(s) of impairment will precede movement of these waters to Category 5 or Category 4c of the integrated list. EPA has recognized in the past that in specific situations the data are not available to develop TMDLs. Data collection and analysis will be performed in an attempt to determine the cause(s) of impairment.

Category 7: Impaired, but the proper technical conditions do not yet exist to develop a TMDL. As described in the Federal Register, "proper technical conditions refers to the availability of the analytical methods, modeling techniques and data base necessary to develop a technically defensible TMDL. These elements will vary in their level of sophistication depending on the nature of the pollutant and characteristics of the segment in question" (43 FR 60662, December 28, 1978). These are waters that would otherwise be in Category 5 of the integrated list. As previously noted, EPA has recognized that in some specific situations the data, analyses or models are not available to establish a TMDL. North Carolina seeks EPA technical guidance in developing technically defensible TMDLs for these waters. Open water fecal coliform impaired shellfishing waters are included in this category.

For this integrated list, Categories 1 and 2 are considered fully supporting any assessed uses. This portion of the integrated list is extensive (thousands of segments); thus, a printed copy is not included in this document. A table of waters on Categories 1 through 3 is available for downloading on the DWQ website (http://h2o.enr.state.nc.us/tmdl/General_303d.htm). Categories 4, 5, 6 and 7 contain those assessment units that have been determined to be impaired in North Carolina. **Therefore, Categories 4, 5, 6 and 7 constitute the 2002 North Carolina 303(d) List for the State of North Carolina**.

Prioritization of Impaired Waters

North Carolina has developed a priority ranking scheme that reflects the relative value and benefits those waterbodies provide to the state. The priority ranking system is designed to take into account the severity of the impairment, especially threats to human health and endangered species, and the designated uses of the waterbody as required by CWA 303(d)(1)(A). Since other agencies and local governments also use this ranking to direct resources and funding, the priority ranking system has intentionally not included factors to reflect the availability of DWQ resources to address either TMDL development schedules or restoration.

A priority of High, Medium or Low has been assigned to all waterbodies in Categories 4b, 5, 6 and 7 of the integrated list. A high priority is assigned to all waterbodies that are classified as water supplies. A high priority is also automatically assigned to all waterbodies harboring species listed as endangered or threatened under the federal Endangered Species Act (ESA). A

medium priority has minimally been assigned to waters harboring state listed endangered and threatened species. As a way of addressing anti-degradation concerns, classified outstanding resource waters and high quality waters start at the medium priority.

Scheduling TMDLs

Category 5 waters, those for which a TMDL is needed, are at many different stages on the path to an approved TMDL. Some require additional data collection to adequately define the problem in TMDL terms. Some require more outreach to increase stakeholder involvement. Others need to have a technical strategy budgeted, funded and scheduled. Some are ready for EPA submittal.

North Carolina has prioritized TMDL development for waters impaired due to bacteria. The approach of prioritizing TMDL development based on pollutant has been successfully used in other states. Limited resources are used more effectively with a focus on a particular pollutant. Waters impaired by other pollutants (i.e., not bacteria) are not excluded from the schedule. However, the majority of waters prioritized for the next few years are associated with bacterial contamination.

The movement of waters from Category 6 (Impaired based on biological data) to either Category 5 or 4c will require a large allocation of resources. North Carolina has used biological data to place the majority of waters on the 303(d) list. Additional consideration and data collection are necessary if the establishment of a TMDL for waters on Category 6 is to be expected. It is important to understand that the identification of waters in Category 6 does not mean that they are low priority waters. The assessment of these waters is a high priority for the State of North Carolina. However, it may take significant resources and time to determine the cause of impairment. Assigning waters to Category 6 is a declaration of the need for more data and time to adequately define the problems and whether they are affected by pollution, pollutants or a combination. Scheduling these waters for TMDL development prior to determining the causes of impairment is misleading and counterproductive.

During this listing cycle, significant resources and a grant from the Clean Water Management Trust Fund were utilized to study multiple waters that were considered impaired based on biological data. One goal of this project was to determine the cause of impairment for these waters. Several of these studies have been completed and causes have been identified. These waters will now move from Category 6 to other locations within the integrated list.

Delisting Waters

In general, waters will move from Categories 4, 5, 6 or 7 when data show that a water is fully supporting its uses. In some cases, mistakes have been discovered in the original listing decision and the mistakes are being corrected. Waters appearing on the previously approved impaired waters list will be moved to Categories 1, 2 or 3 under the following circumstances:

- An updated 305(b) use support rating of supporting, as described in the basinwide management plans.
- Applicable water quality standards are being met (i.e., no longer impaired for a given pollutant) as described in either basinwide management plans or in technical memoranda.
- The basis for putting the water on the list is determined to be invalid (i.e., was mistakenly identified as impaired in accordance with 40 CFR 130.7(b)(6)(iv) and/or *National Clarifying*

Guidance for State and Territory 1998 Section 303(d) Listing Decisions. Robert Wayland, III, Director. Office of Wetlands, Oceans and Watersheds. Aug 27, 1997).

- A water quality variance has been issued for a specific standard (e.g., chloride).
- Removal of fish consumption advisories or modification of fish eating advice.
- Typographic listing mistakes (i.e., the wrong water was identified).