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MEMORANDUM

OFFICE OF  
WATER

SUBJECT: Guidelines for the Preparation of State Water Quality Assessments  
(305(b) Reports) and Electronic Updates for the 2000 Reporting Cycle

FROM: Robert H. Wayland III, Director *Robert H. Wayland III*  
Office of Wetlands, Oceans and Watersheds (4501F)

TO: Regional Water Management Division Directors  
EPA Great Waterbody Program Managers  
Directors, State, Territory and Interstate Water Quality Agencies  
Tribal Water Quality Managers

The purpose of this memorandum is two-fold. First, I'd like to thank you for the efforts put forward by your organizations and staff in developing and submitting the 1998 305(b) Reports. Second, I'd like to call your attention to areas of emphasis and needed improvements for the year 2000 reporting cycle.

For the first time the *National Water Quality Inventory 1998 Report to Congress* will present the status of waters assessed by all 50 states, 8 tribes, the District of Columbia, American Samoa, Guam, Northern Mariana Islands, Puerto Rico, Virgin Islands, Ohio River Valley Water Sanitation Commission, Susquehanna River Basin Commission, Delaware River Basin Commission, and the Interstate Sanitation Commission.<sup>1</sup> This signals a growing commitment to water quality monitoring and assessment.

The individual 305(b) reports and the resulting National Water Quality Inventory are a highly visible mechanism for communicating with Congress and the public about the health of our Nation's waters. The quality of these reports becomes increasingly important as they're used to support decisions on resource allocations to states and tribes under the revised section 106 formula. The Index of Watershed Indicators relies heavily on 305(b) reports. They're also an important tool for tracking the performance of water quality protection initiatives under the Core Performance Measures of the Performance Partnership Agreements and the Government Performance for Results Act.

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<sup>1</sup>For ease of reference, this memo will use the term "states" to refer collectively to all 50 states, the District of Columbia, American Samoa, Guam, Northern Mariana Islands, Puerto Rico, Virgin Islands, Ohio River Valley Water Sanitation Commission, Susquehanna River Basin Commission, Delaware River Basin Commission, and the Interstate Sanitation Commission.

The assessments reported under section 305(b) support water quality management programs in numerous ways. All states use their 305(b) assessments to assist in the identification and ranking of threatened or impaired waters under section 303(d). I emphasize that submission of a 303(d) list is not a substitute for a 305(b) report; rather according to the TMDL regulations, state 305(b) assessments are one of several important sources of readily-available information which must be considered by states in developing their 303(d) lists.

As we look ahead to the 2000 reporting cycle, I'm optimistic that the next round of reports will be even stronger. I expect these reports will demonstrate a significant expansion in the number of waters assessed across all water body types and uses. I also expect to see an increase in the documentation of data quality and use of electronic databases and geographic information systems.

Individual state and tribal 305(b) reports are due on April 1, 2000. They should continue to follow the *Guidelines for the Preparation of Comprehensive State Water Quality Assessments (305(b) Reports) and Electronic Updates* published in 1997. The guidelines reflect the consensus of the state and federal members of the 305(b) Consistency Workgroup. They address key issues affecting the quality and comparability of 305(b) reports including geographic referencing of data, monitoring strategies for comprehensive assessment, biological assessment, and documenting and improving data quality used to assess designated use support. If you'd like copies of these guidelines, contact Susan Holdsworth, in my office, via telephone at 202-260-4743 or email at [holdsworth.susan@epa.gov](mailto:holdsworth.susan@epa.gov).

To supplement the guidelines and reinforce areas of focus for the 2000 report, I am attaching a series of fact sheets. The fact sheets cover elements of the 1998 reports where many states were deficient in their submissions. Please pay particular attention to these areas:

- ✓ Comprehensive Assessments-- Progress should result in full coverage by 2002
- ✓ Electronic Reporting-- All states must submit electronic reports in 2000
- ✓ Abbreviated Reports-- Focus on changes, but include citation to previous reports
- ✓ Use Support Determinations-- Evaluate all applicable uses and document data quality
- ✓ Water Body Types-- Include lakes, wetlands, ground water, coral reefs and other ocean resources in addition to traditional focus on rivers and streams and estuaries
- ✓ Sources and Causes of Impairment-- Improve documentation of sources and causes associated with waters identified as impaired or threatened
- ✓ Core Performance Measures-- Use 305(b) to report progress under state performance partnership agreements

My priority is to improve the quality of monitoring and assessment data and reporting. This should be accomplished by thorough implementation of the 1997 guidelines-- applied to all waters of the United States. As we continue to work together to improve the quality of 305(b) reports, please feel free to contact Susan Holdsworth, the national 305(b) coordinator at 202-260-4743 or Margarete Heber, Chief of the Monitoring Branch at 202-260-7144.

#### Attachments

cc: (with attachments)

Assistant Administrator for Water  
Deputy Assistant Administrators for Water  
OW Office Directors  
305(b) Consistency Workgroup  
State, Territory and Interstate 305(b) Coordinators  
305(b) Tribal Water Quality Coordinators  
Regional Water Quality Branch Chiefs  
Regional 305(b) Coordinators  
Regional WBS/ADB/STORET Coordinators  
Regional Monitoring Coordinators  
Regional Water Quality Standards Coordinators  
Regional Nonpoint Source Coordinators  
Regional TMDL Coordinators  
Regional Watershed Coordinators  
Regional Ground Water Representatives  
Regional Drinking Water Coordinators  
Regional Wetlands Coordinators  
Regional NEP Coordinators  
Regional Biologists  
Regional REMAP Coordinators  
National Water Quality Monitoring Council





## 305(b) Report Guidelines Fact Sheet

### Comprehensive Assessments

*Section 305(b) of the Clean Water Act calls for each state to assess and report on the ability of all waters of the state to support the goals of the Act. One of the major challenges facing states is obtaining comprehensive coverage of state waters. Historically, most state assessments focus on rivers, streams, lakes, and estuaries. Some types of waters are rarely assessed like wetlands, oceans and ground water. Through implementation of the 305(b) Guidelines, states will achieve comprehensive assessment of most waters over the next few reporting cycles.*

One of the key issues addressed by the 305(b) Consistency Workgroup in the 305(b) Guidelines was comprehensive assessment. The guidelines specifically request that states and tribes document their progress toward *comprehensive assessments* of all waters (Guidelines Vol. 1, pp 1-8 and 4-3). The 305(b) Consistency Workgroup, comprised of over 50 representatives from EPA, state, territories, and tribes, identified a number of actions that, when used together, will improve the amount and reliability of data used to progress toward comprehensive water quality assessment.

#### Monitoring Design

The 305(b) Consistency Workgroup identified two primary monitoring approaches that support comprehensive assessments. They are *rotating basin monitoring* and *probabilistic sampling*. A combination of these approaches offers the best means for making statistically valid statements about water quality at the basin or watershed level as well as statewide. The 305(b) Guidelines offer flexibility in designing monitoring networks that best meet the needs of states or tribes within the framework of achieving comprehensive assessments of all waterbody types and all applicable designated uses.

Under the *rotating basin approach*, states can achieve comprehensive monitoring of all waters in a state over a set period (typically five years) by intensively monitoring approximately one-fifth of their watersheds each year. Over 20 states have implemented or are in the process of implementing a rotating basin approach. The advantages of this approach include greater cost-effectiveness and the

ability to support multiple regulatory and programmatic objectives including:

- Listing impaired and threatened waters under Section 303(d)
- Characterizing causes and sources of impairments
- Developing TMDLs
- Evaluating the effectiveness of TMDL implementation
- Reevaluating and revising water quality standards.

See the 305(b) Guidelines Volume 2, Appendix B for an overview of one state's rotating basin approach or contact your EPA Regional Monitoring Coordinator for detailed information on other states' approaches.

*Probability-based monitoring* utilizes a sample survey design so that monitoring and assessment data characterize, with defined statistical confidence, all waters of the state. This approach eliminates the potential for sampling bias towards waters with known problems. Another advantage of a probability-based design is that it allows the extrapolation from a relatively small sample of monitored sites to the entire population of waterbody types covered by the design. At least seven states are implementing or evaluating a probabilistic monitoring approach, either at the basin, ecoregion, or statewide level. For more information about the characteristics of probabilistic monitoring, see Guidelines Volume 2, Section 2.2 and Appendix I.

Probability-based assessments can also help evaluate the adequacy of 303(d) lists by indicating the proportion of waters that are expected to be

threatened or impaired. However, probabilistic monitoring alone does not identify the specific location of all the impaired or threatened waters.

Some states use a probabilistic sampling design within their rotating basin framework to ensure comprehensive coverage for each basin and ultimately across the state. This combination of approaches enables a state to meet multiple program objectives, achieve comprehensive assessment and ensure statistically-defensible results. Under the Environmental Monitoring and Assessment Project Western Pilot, EPA and the states of Regions 8, 9, and 10 are developing a probability-based sampling design to characterize water quality of all perennial rivers and streams of each state. For information about EPA technical support for implementing such sampling designs, contact your EPA Regional Monitoring Coordinator.

### **Data Sharing**

Collaboration among a wide variety of sources of well-documented data is another means to increase the amount of data used to assess water quality. Many other organizations monitor water quality and other related environmental attributes. Much of this outside data meets the data quality objectives of states and tribes' assessment programs. Examples of potential sources of data include volunteer monitoring groups, universities and other federal and state agencies. Appendix H in the 305(b) guidelines describes some additional sources of data for 305(b) assessments.

The EPA Office of Water is working throughout the agency and federal government to promote the use of the new STORET as a data management and warehouse tool for physical, chemical, and biological data. A key feature of the new STORET is better documentation of data quality. In addition to training on STORET for states and EPA, we are also providing training to tribes, volunteer monitoring groups, and other federal agencies in order to improve the accessibility of data of documented quality. The 305(b) Guidelines, like the 303(d) regulations, recommend using all relevant and available data to supporting state and tribal 305(b) assessments.

### **Monitoring Consortiums**

Several states are forming monitoring councils or consortiums to better utilize resources and maximize the quality and quantity of water resource monitoring data. A monitoring consortium brings together the monitoring objectives and resources of a network of stakeholders conducting complementary or duplicative monitoring and facilitates a more efficient monitoring program. Forming these partnerships enhances not only the quality and reliability of assessments, it improves the partners' understanding of the 305(b) assessments and expands the utility of 305(b) reports. EPA encourages states and tribes to form or actively participate in monitoring councils or consortiums. Contact EPA's liaison to the National Monitoring Council, Chuck Spooner, at (202)260-1314 or Susan Holdsworth for more information about state monitoring councils or consortiums.

For more information about the 305(b) program or a copy of the Guidelines:

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National 305(b) Coordinator  
U.S. Environmental Protection Agency

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## 305(b) Report Guidelines Fact Sheet

### Electronic Reporting

*During the 1998 reporting cycle, over 30 states submitted data electronically using the Waterbody System or a compatible database. As described in the 305(b) guidelines, all states should to submit data electronically for the 2000 reporting cycle. Tribes are encouraged to report electronically as well.*

#### New Assessment Database

The upgrade of the Waterbody System, called the 305(b) Assessment Database (ADB), was beta tested by over a dozen states. After fine-tuning of the system based on the beta tester feedback, it is now available for use. While the Waterbody System still functions, the ADB offers new and improved features including a menu-based data entry screen and automated data error checks.

OWOW encourages all Waterbody System users to transfer to the ADB contact Tod Dabolt at 202-260-3697 or [dabolt.thomas@epa.gov](mailto:dabolt.thomas@epa.gov) for assistance migrating old data into the new format. States and tribes that have no 305(b) assessment database, or that might benefit from switching to a modern relational database, are encouraged to review the ADB. You can download the ADB and Users Manual over the internet at the following site:

[water305b.rti.org](http://water305b.rti.org)

Once at the site, go to the ADB/ver1.0 directory. The README.txt file describes how to install and start the ADB. The technical support line for the ADB is (919) 485-7770 at Research Triangle Institute.

#### Waterbody-level Assessment Files

States, territories, and tribes using the ADB or other 305(b) databases are encouraged to transmit annually to EPA their entire database (i.e., waterbody-level data for all assessed waterbodies in their jurisdiction). By keeping your database up-to-date and transmitting the entire database you will help ensure that EPA accurately incorporates your data into the National Assessment Database.

If an agency doesn't want to transmit its entire database, it may opt to send data for entire basins or watersheds that were assessed during the year. EPA will blend these new data with existing data for other basins/watersheds sent during previous reporting cycles. EPA urges states to send datasets covering entire basins or watersheds, not data for waterbodies scattered around the state, since this presents an almost impossible "blending" task for anyone not intimately familiar with the state's data. Also, to help EPA accurately use your data, please provide the latitude/longitude coordinates or the 8-digit USGS Cataloging Unit for the database.

#### Causes and Sources

Documentation of causes and sources of impairment is an important field in the assessment database. This information is integral to the presentation of the relative role of nonpoint sources under 305(b), the review and revision of water quality standards, and the development of TMDLs for impaired waters.

The new ADB allows users to 1) document causes and sources at the waterbody level, 2) link causes and sources to individual use impairment, and 3) track causes and sources to threatened waters in addition to impaired waters.

#### GIS Coverages

States that transmit electronic GIS coverages improve the accuracy of data displays in the 305(b) Report to Congress. GIS coverages of water quality also assists state water resource managers in prioritizing management activities. At least ten states developed GIS coverages of their 305(b) waterbodies for the 1998 report. These coverages provide detailed maps showing designated use support and causes and sources of impairment in their waters. States present these maps as hard copy

and display them on state web sites. Several states received. Contact Tod Dabolt for more assistance from EPA for their georeferencing work.

### **Metadata**

Send your Assessment databases April 1, 2000 as e-mail attachments, via FTP, or on disk to your EPA Regional 305(b) Coordinator with a copy to Tod Dabolt of OWOW. The transmittal should include metadata providing basic information about the format and content of the electronic data files (see box). This information is critical for proper use of your data, whether in the Assessment Database or alternative software. A GIS coverage should include the standard types of metadata such as contact person, contents, description of data elements, definitions of user-defined codes, and projection; also include datum, units, and any additional parameters needed to use the coverage.

#### **Metadata Needs**

- Contact person's name, address, phone
- Database format
- Status of database, draft or final
- Contents of database, entire state or selected basins
- Data dictionary defining database fields and data codes

### **Data Quality and Completeness**

Section 6 of the 305(b) Guidelines, Volume 1, describes data quality needs in detail. Refer to table 6-1 in the Guidelines for a list of key data elements and page 6-9 for general data rules. For the year 2000 and beyond, ensure that the metadata fields in your assessment database are populated. Such fields include assessment type, assessment comments, and level of information codes (see Table 6-1). These fields will make your database more useful to other professionals in your agency as well as to EPA.

### **Ground Water Reporting**

In 1998, 31 states submitted updated ground water tables in database, spreadsheet, or word processing format. These tables, are described in Section 5 of the 305(b) Guidelines, Volume 1. Contact Roger Anzzolin of the Office of Ground Water and Drinking Water, at (202) 260-7282 or [anzzolin.roger@epa.gov](mailto:anzzolin.roger@epa.gov) for WordPerfect table format.

For more information about the 305(b) program or a copy of the Guidelines contact:

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## 305(b) Report Guidelines Fact Sheet

### Abbreviated Narrative Reports

*As an incentive to increase the use of annual electronic reporting, the 305(b) Guidelines offer states, territories, commissions, and tribes the option of preparing an abbreviated narrative report instead of a complete narrative report every two years if they transmit electronic databases. States, territories, commissions, and tribes must negotiate with their EPA Regional 305(b) coordinator before exercising this option. The idea is that EPA will use the combination of the abbreviated reports, electronic 305(b) databases, and previously submitted complete reports to prepare the national Report to Congress.*

*To prevent abbreviated narrative reports from referencing data and information that are too old, a complete narrative report is required periodically. The next complete narrative report is required in 2002. An abbreviated narrative report is acceptable in 2000, provided the EPA regional coordinator agrees that a complete report already exists on file.*

The intent of the abbreviated narrative report is to focus on changes that occurred during the reporting cycle such as:

- ✓ Different basins or watersheds assessed
- ✓ Improvements or reductions in water quality
- ✓ Actions taken to improve program effectiveness
- ✓ New information gathered to support assessments
- ✓ Better data management tools employed.

The abbreviated narrative report still needs to include all the sections of a full report. However, rather than drafting new text for each section, you may refer the reader to specific sections of a previous complete report. Of course, this means the previous report must still be available for review. A few specific reminders about the abbreviated report are listed below:

- ✓ Reports accompanied by electronic databases do not need to include summary tables of the level of use support for each waterbody type if the database can generate these tables. However, it's a good idea to include summary tables to help EPA correctly summarize your data.
- ✓ If you're using a probabilistic monitoring network you do need to include summary tables describing the network results in the abbreviated report and transmit the waterbody-specific data in the electronic update.

- ✓ The abbreviated report must contain a complete executive summary and a description of progress toward achieving comprehensive assessments.
- ✓ For each section of the 305(b) report that is abbreviated, include a statement that no significant changes have occurred since the last complete 305(b) report and reference the section or pages of the complete report where the information can be found.

EPA Region 2 developed a checklist to review the contents of 305(b) reports. It itemizes the contents of the 305(b) report guidelines and identifies the elements of an abbreviated report. Contact Susan Holdsworth or your EPA Regional 305(b) coordinator for a copy of the checklist.

You are encouraged to take advantage of the abbreviated report in 2000 and to focus resources on monitoring activities and implementation of the electronic data management and reporting tools.

For more information about the 305(b) program or a copy of the 305(b) Report Guidelines contact:

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## 305(b) Report Guidelines Fact Sheet

### Use Support Determinations

*Through the 305(b) Consistency Workgroup, EPA and state representatives work together toward improving the consistency among state and tribal 305(b) reports. While significant progress has been made, there are still areas needing attention and new issues have been raised. Several of these are highlighted below. Volume 2 of the 305(b) Guidelines (EPA-841-B-97-002B) provides instructions on improving the completeness and consistency of water quality assessments.*

#### Assessing All Designated Uses

For the year 2000 report and beyond, states and tribes are asked to improve their coverage of all designated uses including:

- Drinking water
- Swimming and other recreation
- Fish consumption
- Ceremonial uses
- Aquatic life

For example, increased coordination with state health departments may improve the datasets available for assessing drinking water and swimming uses. Wider coverage of fish consumption use may be possible with more extensive analysis of fish tissue data and greater coordination with the state agency issuing fish consumption advisories.

See the 305(b) Report Guidelines Fact Sheet on comprehensive assessments for more information on increasing the amount of data available to make water quality assessments. Section 3 of the 305(b) Report Guidelines, Vol. 2, discusses data sources and other factors relevant to expanding water quality assessments to all designated uses.

#### Documenting the Type of Assessment Data

Improved documentation of Assessment Types for these designated uses is needed (see Guidelines Vol. 2, Table 1-1). This is an important type of information that will help other professionals in your agency and in EPA properly use and interpret your data.

#### Documenting Data Quality for Aquatic Life Use Support Determinations

The 305(b) Consistency Workgroup outlined a process to begin implementing the Interagency Task Force on Monitoring recommendations on integrating the results of biological, habitat, chemical and

toxicological assessments to assess aquatic life use support. This process includes documentation of the type and quality of the information supporting the assessment. It is detailed in Chapter 3, Volume 2 of the 305(b) Report Guidelines.

The 305(b) Consistency Workgroup concluded that descriptive information characterizing the level of information or rigor in the method for assessing use support is needed to more fully define and understand assessment findings. The rigor of a method is dictated by its technical components such as spatial and temporal coverage, precision, and sensitivity of the data. The Workgroup developed a hierarchy of four levels of information for each of the four data types—biological, habitat, toxicological, and physical/chemical. These hierarchies provide guidance in defining the level of information used to make aquatic life use support determinations.

States, territories, commissions and tribes are asked to use these hierarchies and report the level of information used. The new 305(b) Assessment Database (ADB) provides data fields for use in entering this information, and states that do not use the ADB can get help including these fields in their own customized databases.

For more information about the 305(b) program or a copy of the 305(b) Report Guidelines contact:

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## 305(b) Report Guidelines Fact Sheet

### Waterbody Types

*EPA applauds efforts that have resulted in expanded assessment coverage of streams/rivers and estuaries in recent years. We also recognize that coverage of other waterbody types is still low. Through the implementation of monitoring strategies aimed at comprehensive assessment, states, territories, commissions, and tribes will improve their understanding of the quality of all waters. For the year 2000 report and beyond, states and tribes are asked to improve their coverage of all waterbody types as much as possible.*

#### Assessing All Types of Waterbodies

The directives of section 305(b) of the Clean Water Act call for a description of the quality of all waters. This characterization of water quality must include two things. First, a comparison of water quality with water quality standards. And second, an evaluation of the extent to which water quality provides for the protection and propagation of a balanced population of shellfish, fish, and wildlife and allows recreational activities.

Since the 305(b) Report Guidelines were last updated in 1997, the implementation of comprehensive assessments has expanded the amount of waters assessed. The most significant increase was in the amount of river and stream miles assessed in 1998. For the 2000 report and beyond, states, territories, commissions, and tribes are asked to continue this trend of increasing coverage of waters and to expand it to all types of waters.

Please refer to the 305(b) reporting guidelines and the fact sheets on Comprehensive Assessment and Ground Water for more information on this topic.

#### Lakes, Ponds, and Reservoirs

Some states assess only a small fraction of their lakes and reservoirs. Aggregated nationally, states and territories reported on the quality of about 42 percent of the nation's lake acres in 1998. This increased from 40 percent in 1996.

Chapter 4 in volume 1 of the 305(b) report guidelines describes the information on assessments of lakes needed in the 305(b) report.

This summer EPA is beginning a project to sample fish tissue in lakes nationwide. This project, implemented in partnership with states, will provide valuable information to supplement efforts to assess the quality of lakes.

#### Wetlands

Wetland assessment programs are still developing and as a result only 4% of wetland acreage nationwide was assessed for the 1998 305(b) reports. The 305(b) Report Guidelines request that states, territories, commissions, and tribes describe their efforts to build wetland monitoring programs or to integrate wetlands into existing surface water monitoring programs. The guidelines ask for information on progress toward developing and implementing wetland water quality standards. They also request description of efforts, and their success, to prevent losses and expand restoration of wetland acres.

Chapter 4 in volume 1 of the report guidelines contains detailed guidance on describing wetlands quality and programs to protect wetlands.

#### Coastal Resources

While coverage of the Great Lakes coastline is near 100 percent, the 1998 305(b) reports included assessment information for only 4% of ocean shoreline miles. The 305(b) report guidelines (chapter 4, volume 1) ask for separate information on ocean coastal resources. Please refer to the report guidelines for more information on reporting about coastal resources. In addition, the next section describes a new source of information on coastal

resources- coral reef assessments. States and territories are encouraged to include the results of efforts to assess the conditions of coral reefs in their 2000 assessment report.

### **Coral Reef Assessment and Protection Efforts Provide New Information on Coastal Resources**

In response to increasing evidence of the degradation of coral reefs in the U.S. and around the world, Presidential Executive Order 13089 on Coral Reef Protection was issued on June 11, 1998. This Executive Order establishes the U.S. Coral Reef Task Force and charges it with undertaking coordinated and comprehensive coral reef mapping and monitoring; research; conservation, mitigation, and restoration; and international cooperation activities to protect coral reef ecosystems. U.S. coral reef areas include Hawaii, Florida, Texas, Puerto Rico, Northern Mariana Islands, American Samoa, Guam, and the U.S. Virgin Islands.

Hawaii and Florida shared reports on coral reefs in 1998. These documents provide data for the national 305(b) report to illustrate efforts underway to monitor and assess the health coral reefs. In order to ensure that information on the quality of coral reefs becomes an integral component to the ocean resources section of the national 305(b) Report to Congress, the 305(b) guidelines for the 2002 reporting cycle will include information about reporting on coral reef assessments. In the interim, EPA encourages states and tribes to submit information about the health of coral reefs as part of, or a supplement to their 305(b) reports in 2000.

For more information about the 305(b) program or a copy of the 305(b) Report Guidelines contact:

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## 305(b) Report Guidelines Fact Sheet

### Sources and Causes of Impairment

*Many states do a thorough job of tracking causes (stressors) and sources of impairment, while other states do not. All 305(b) assessments at the waterbody level should include causes/stressors and sources contributing to impairment of designated uses. This information is integral to the review and revision of water quality standards as well as the development of TMDLs for priority impaired waters. Clearly, it is also important for a water quality management program to track the causes and sources of pollution to waters that are not yet impaired, but are threatened by a downward trend in water quality. This information is important for targeting pollution prevention efforts.*

For the 2000 reporting cycle, three aspects of reporting on causes/stressors and sources need improvement:

- ✓ Including in assessment databases causes/stressors and sources of impairment at the waterbody level for all assessments
- ✓ Including causes and sources for threatened waters too
- ✓ Linking causes/stressors and sources to specific designated uses that are impaired or threatened.
- ✓ Documenting the approaches used to identify causes/stressors and sources.

Several states are not tracking these important data, resulting in incomplete or inaccurate summaries and other problems. Since 305(b) assessments become a starting point for development of TMDLs, it is important for states to more fully document the causes and sources associated with threatened and impaired waters as well as the methodology used to identify them. A description of the approaches used by states, territories, commissions and tribes should become an element of the methodology section of the 305(b) report. This topic will likely be

addressed by the 305(b) Consistency Workgroup in the next round of revisions to the 305(b) Guidelines.

The new Assessment Database can help states or tribes track causes/stressors and sources related to impaired waters and threatened waters, as well as linking causes/stressors to specific designated uses. See the 305(b) Fact Sheet "Electronic Reporting." The contact for information about electronic tracking and reporting of causes/stressors and sources is Tod Dabolt, (202) 260-3697 or e-mail [dabolt.thomas@epa.gov](mailto:dabolt.thomas@epa.gov).

For more information about the 305(b) program or a copy of the 305(b) Report Guidelines contact:

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## 305(b) Report Guidelines Fact Sheet

### Core Performance Measures

*Under the National Environmental Performance Partnership System, EPA and the Environmental Council of States (ECOS) agreed that core performance measures are a limited set of national measures, designed to help gauge progress towards protection of the environment and public health. ECOS and EPA worked to develop core performance measures for use by states and EPA in negotiating Performance Partnership Agreements.*

*Water quality monitoring and assessment activities support several of the core performance measures. The state 305(b) report is a mechanism through which states report on core performance measures dealing with water quality. EPA is looking for annual updates on the core performance measures through the annual electronic update of state 305(b) assessments.*

There are three performance measures that are directly supported by states 305(b) assessments. The first two measures listed below are typically included in the summary tables in a state's 305(b) report. The third measure is a new addition, but can be generated from the state's 305(b) assessment database.

**1. Number and percent of assessed river miles, lake acres, and estuary square miles that have water quality supporting designated beneficial uses, including, where applicable:**

- (a) fish and shellfish consumption;
- (b) recreation;
- (c) aquatic life support; and
- (d) drinking water supply.

Reporting on this core performance measure is the centerpiece of the 305(b) report. The strength of this performance measure is maximized when states, territories, and tribes achieve comprehensive monitoring and assessment.

**2. Percent of total river miles and lake acres that have been assessed for the need for fish consumption advisories; and compilation of state-issued fish consumption advisory methodologies, as reported through the National Listing of Fish and Wildlife Advisories.**

This core performance measure also utilizes the 305(b) assessment to track river miles and lake acres that have been assessed for fish consumption use support.

The other element of this measure, not specifically included in 305(b) reports, is the compilation of state-issued fish consumption advisory methodologies. These are reported through the EPA National Listing of Fish and Wildlife Advisories database.

**3. Number and percent of assessed river miles, lake acres, and estuary square miles identified as impaired that**

- (a) are covered under the Clean Water Action Plan's Watershed Restoration Action Strategies (WRAS), and
- (b) were restored to support their designated uses during the reporting period. (The reporting period is two years.)

**Note: (b) is not limited to waters covered under CWAP's WRASs.**

In responding to part (a) of this core performance measure, states report which watersheds (using the 8-digit HUC or finer geographic resolution) are covered by WRAS. For each WRAS watershed, EPA will need to know the total number of stream miles, the number of assessed

miles, and the number of impaired miles within that watershed. (The reporting period is two years.)

If a state uses the assessment database or a compatible electronic database to store its assessment data, EPA should be able to calculate this core performance measure for the state. The state needs to ensure that it stores HUC numbers or other appropriate geographic codes in its assessment database, or has reach-indexed its assessments to the Reach File (RF3). The state also needs to provide the database and adequate documentation (metadata) to EPA in order for EPA to calculate the number and percent of impaired miles covered by the WRAS. Otherwise the state will need to report the number of impaired miles in the watersheds covered by the WRAS.

Part (b) of this core performance measure is tracking progress toward restoring impaired waters. Measuring the effectiveness of restoration activities requires follow up monitoring over a long period of time. Those using a rotating basin monitoring design will detect improvements through return monitoring (e.g., every 5 years).

For more information about the 305(b) program or a copy of the 305(b) Report Guidelines contact:

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## 305(b) Report Guidelines Fact Sheet

### Ground Water Assessments

*EPA applauds efforts by States to assess ground water quality using the Ground Water Guidelines. Ground water quality assessments are performed and reported by States under the 305(b) program, providing much needed information to characterize water quality in the nation's aquifers. Gaps that exist in the data preclude a comprehensive assessment of our nation's ground water quality. These gaps can be filled by (1) increasing the number of states that report results, (2) increasing the number of aquifers for which results are reported, and (3) designing monitoring programs to collect ambient ground water quality data.*

The 305(b) program is definitely moving in the direction of more and better ground water quality assessments, but there is still much that needs to be done. Coverage of the aquifers within a state and the number of states reporting ground water quality monitoring data needs to be increased.

#### Data Comparability

For the 1998 305(b) cycle, 31 states reported ground water quality monitoring data. An additional 14 states also reported data. However, these data were not reported in a format that was compatible with the 305(b) data format and could not be used in the national summary. To avoid the loss of valuable data, states must use the formats presented in Section 5 of the 305(b) Guidelines, Volume 1. Furthermore, it is expected that all states will report ground water quality data in 2000.

#### Monitoring Design

The 305(b) Ground Water Focus Group identified two monitoring approaches that support comprehensive ground water assessments. These two approaches offer flexibility in designing monitoring networks that best meet the needs of states within the framework of achieving comprehensive ground water assessments. Specifically, states may implement either a statewide monitoring approach or a rotating basin approach in which approximately one-fifth of the state's aquifers are assessed annually. Over the course of five years, a comprehensive assessment will be completed and the cycle can be repeated. See the 305(b) Fact Sheet

#### "Comprehensive Assessments."

States that have the ability to monitor ground water quality on a statewide basis should report their most current monitoring results in 2000. States that have implemented the rotating basin approach should report results for the aquifers selected for assessment in 2000.

#### Monitoring Data

States need to focus assessment efforts by collecting ground water quality data that is most representative of the resource itself. Specifically, states need to rely less on finished water quality data and more on ambient monitoring data and/or untreated water quality data. Only as a last resort should states default to finished water quality data. Ground water samples should be analyzed for the suite of chemicals most likely to be present in the area and have the greatest potential to adversely impact the resource.

#### Reporting Formats

Ground water assessment data should be reported using the four table formats presented in Section 5 of the 305(b) Guidelines, Volume 1. The tables are available in WordPerfect format from EPA. The tables may be submitted to EPA in either paper or electronic formats. States should strive to display aquifers, sources of contamination, and contaminants in GIS format to improve the capability for better analysis and understanding of ground water conditions.

States should provide abbreviated narrative reports with the tabulated data. The abbreviated reports are expected to include all the sections of the full report. If no significant changes have occurred since submittal of the last full report 305(b) report, sections in the abbreviated report may be completed by referring the reader to information in the last full report. The abbreviated report must contain a description of the status toward achieving comprehensive assessment and the methodology used to complete the four tables.

The EPA contact for ground water reporting is Roger Anzzolin of the Office of Ground Water and Drinking Water, (202) 260-7282 or [anzzolin.roger@epa.gov](mailto:anzzolin.roger@epa.gov).

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