

May 5, 2009

MEMORANDUM

Subject: Information Concerning 2010 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions

FROM: Suzanne Schwartz, Acting Director /s/
Office of Wetlands, Oceans, and Watersheds

TO: Water Division Directors
Regions 1 – 10
Mike Kenyon, Director, Office of Environmental Measurement and Evaluation, Region 1
Deb Szaro, Acting Director, Division of Environmental Science and Assessment, Region 2
Ron Hammerschmidt, Director, Environmental Sciences Division, Region 7
Joyce Kelly, Director, Office of Environmental Assessment, Region 10

I am pleased to provide to you and your States information to assist in the preparation of the 2010 Integrated Water Quality Reports (IR), in accordance with CWA Sections 305(b), 303(d) and 314 and the review of CWA Section 303(d) lists that are to be submitted to EPA by April 1, 2010. This memorandum is intended to clarify existing policy and regulations and provide recommendations and options for the States as they develop their 2010 submissions. It also provides guidance to the Regions as they review and take action on State section 303(d) lists.¹ This memorandum is not regulation and does not impose legally binding requirements on EPA or the States. This guidance updates previous guidance and, to the extent it is different, supersedes previous guidance. In particular, EPA recommends that States prepare their 2010 submissions consistent with previous EPA guidance including EPA's 2006 Integrated Reporting Guidance, which is supplemented by this memorandum and EPA's information for the 2008 reporting cycle (<http://www.epa.gov/owow/tmdl/guidance.html>).

A major goal of the 2010 reporting cycle is to achieve 100 percent on-time submittal of IRs (all 56 States and Territories by April 1, 2010). Although this goal was not achieved for the 2008 reporting cycle, both States and EPA made substantial progress. For example, the number of States submitting their IRs by the end of the fiscal year increased from 27 in FY06 to 40 in FY08 – a 50 percent increase. Similarly, the number of final approval actions taken by EPA on States' Section 303(d) lists by the end of FY08 more than doubled. Progress on States' timely submissions and EPA approvals should continue to be a cornerstone of coordination between States and EPA for the 2010 reporting cycle. Timely submittal and review is needed to meet State and EPA responsibilities under the CWA and central to demonstrating State and EPA success in accomplishing our strategic plan goals for restoring and maintaining the Nations' waters. Furthermore, timely submittal and review provides the public and regulated entities up-

¹ It is important to note that under CWA section 303(d) and 40 CFR 130.7, EPA takes action only on the State's section 303(d) list of impaired waters still requiring TMDLs. Other portions of the Integrated Report include information that is not subject to EPA approval or disapproval under CWA section 303(d).

to-date information on the water quality status of waters in each State and ensures EPA includes States' most current water quality information in its biennial national water quality report to Congress. To achieve this goal, EPA continues to encourage States and Regions to coordinate closely during the development of IRs for the 2010 reporting cycle such that the States' submittals are on time and contain the information the Regions need to review the Section 303(d) lists in a timely fashion.

The objectives of this memorandum are to provide recommendations and options to Regions and States that will continue to facilitate and enhance timely State IR submissions and EPA final decision making on Section 303(d) lists, result in more representative and consistent national listing decisions, and promote a more transparent linkage between State water quality standards and methodologies. To assist in attaining these objectives, EPA is providing information in this memo on the following issues well in advance of the April 1, 2010, due date for States' submissions:

1. Suggestions for the appropriate use of *rotating basin* approaches
2. Suggestions for the appropriate use of *Category 3*
3. More detail on *deferring EPA action* on certain impaired waters
4. Suggestions on the use of *state-wide statistical surveys*

The issues addressed in this memorandum and proposed for future coordination were identified from a number of State and EPA sources, including: EPA Headquarters 303(d) program meetings with each Region, EPA Regional 303(d) program meetings with their States, Regions and States during the 2008 IR reporting cycle, and a recent report by the Association of State and Interstate Water Pollution Controls Administrators (ASIWPCA) entitled, *Workload Burden Reduction Workgroup Recommendations*. Regarding the later, ASIWPCA formed a workgroup of States to identify opportunities to reduce the workload burden for States associated with their development and submission of Section 303(d) lists/IR, while maintaining the quality and completeness of those reports. Simultaneously, EPA undertook a companion effort to identify opportunities to improve the timeliness of reviews of and decisions on State IR submissions.

Over the next year, EPA will be collaborating with the States to provide recommendations and options for a number of other issues raised during the 2008 IR cycle. It is EPA's expectation that these recommendations and options will be available to States as they develop their 2010 IR submissions. In particular, EPA will:

- Collaborate with States and Regions to identify opportunities to streamline and improve the electronic reporting and processing of IR assessment data.
- Compile a list of Category 4b demonstrations that have been successfully vetted through EPA's Section 303(d) review process and identify "good example" Category 4b demonstrations that involve more than NPDES permits.
- Continue to track and document progress on the timeliness of State submissions and EPA review and approval for both the 2008 and 2010 reporting cycles.
- Identify opportunities to factor the influence of climate change into States' water quality assessments, priorities and TMDL schedules based on sound science and with consideration to any multi-media policy implications.
- Continue to discuss approaches for using multiple lines of evidence in making water quality assessments.

- Identify options for interpreting water quality data and information for aquatic nuisance species (also known as invasive or exotic species).
- Continue to discuss with the States and Regions options for assessing ephemeral waters.

I appreciate the specific efforts of the States, interstate commissions, and Regions that brought all of these issues to our attention and provided information used in this enclosure. Thank you all for your continued hard work and dedication in developing the integrated reports. If you have any questions or comments concerning this memorandum, please contact me or have your staff contact Michael Haire at 202-566-1224.

Enclosure

cc: Regional Section 303(d) Coordinators
Regional Monitoring Coordinators
Regional Water Quality Standards Coordinators
Linda Eichmiller, Association of State and Interstate Water Pollution Control
Administrators

Enclosure

1. Suggestions for the appropriate use of a *rotating basin* approach

EPA continues to support the rotating basin approach as an effective tool for States to make water quality assessment determinations and manage their water quality programs. In this approach, available assessment resources are concentrated or targeted in defined watersheds for a specified period of time, thus allowing for data to be collected and assessed in a spatially and temporally “focused” manner. Over time, every portion of the state is targeted for monitoring and assessment (often over a four or five year period).

The rotating basin approach provides multiple advantages to States, including the effective use of limited State resources and higher resolution assessments of watersheds over time. The approach also provides States an opportunity to advise and coordinate more closely with citizens and watershed groups on upcoming monitoring and assessment efforts in the targeted basin. Furthermore, some States are using the rotating basin approach as an effective means to coordinate interconnected water programs such that TMDL development and NPDES permitting sequentially follow water quality monitoring and assessment according to a basin rotation schedule.

For States using a rotating basin approach, EPA recommends that they provide a description of the approach in their IR, including a discussion of how the approach is incorporated into the State’s monitoring and assessment methodology. This description of the State’s rotating basin approach might include:

- A schedule of when each basin will be targeted,
- The type of data and information that is being solicited in the targeted basin,
- The preferred format for submitting data and information,
- The cut-off date for receiving data and information used in a reporting cycle, and
- How and when data and information submitted from outside of the target basin will be considered

States using a rotating basin approach may consider explaining in their data solicitation that a special emphasis is being placed on obtaining and considering data and information from the basin of interest, but that data and information from outside of the basin may also be considered for water quality assessments, NPDES permitting decisions, TMDL development, compliance monitoring, etc. EPA expects that States will, consistent with their assessment and listing methodologies, continue to consider all existing and readily available data and information in making water quality attainment determinations.

EPA expects that States using a rotating basin approach will continue to submit a 303(d) list/IR on a biennial basis that reports on the water quality status of all waters in the State. However, as a practical matter, EPA understands that the submittal would primarily reflect more up-to-date data and information from the basins targeted since the previous reporting cycle and the reported attainment status of waters in the non-targeted basin could largely remain unchanged.

2. Suggestions for the appropriate use of *Category 3*

EPA continues to recommend that there are a number of appropriate circumstances for assigning waters to Category 3 of a State's Integrated Report rather than including them on the State's Section 303(d) list; however, such assignments are considered temporary until sufficient data and information are obtained to support a designated use attainment determination. As discussed in the 2006 IR guidance, Category 3 is reserved for those waters where there are insufficient available data and information to make a designated use attainment determination. One of the goals of Category 3 is to provide transparency to the public that waters not on a State's 303(d) list may not necessarily be meeting water quality standards. Also, Category 3 is consistent with, and responds to, one of the recommendations in the National Research Council's 2001 report, "Assessing the TMDL Approach to Water Quality Management," which suggests that a category be created for those waters where there existed insufficient data and information to assess the designated uses.

Depending upon the state's water quality standards, there may be circumstances when it is impossible to make an attainment decision because the state has determined that the available data and information is insufficient. Examples of these circumstances are, (but are not limited to) when the state concludes:

- The existing and readily available data and information were collected using unacceptable quality assurance/quality control.
- The quantity of the existing and readily available data and information, irrespective of quantity thresholds, is inadequate to provide an accurate assessment.
- The existing and readily available data and information is not representative of current conditions of the water body. This rationale might include a determination that: significant land use changes have occurred in the watershed changing the hydrology and nonpoint source loadings, point source discharges were removed, new discharges are now operating, or the locations of sampling stations did not reflect the character of the segment (e.g., limited to locations near discharge outfalls).

Although there are appropriate uses for Category 3, EPA expects that States will make every attempt to be inclusive in the types of data and information they use to make attainment determinations as required by the regulations (40 CFR 130.7(b)(5)). For example:

- States should clearly explain their rationale for setting minimum data quantity thresholds in their assessment methodologies, and should describe how they consider data sets that do not meet these thresholds.
- While some older data may not be representative of current water quality conditions, especially for pollutants that exhibit shorter-term effects, EPA believes that data should not be treated as unrepresentative of water quality conditions *solely* on the basis of age. Older data and information should be considered unless supporting information indicates that the data are not a representative of current conditions.
- If an outside entity fails to provide the necessary metadata with their submitted data and information, the State should attempt to obtain the metadata from the entity before

concluding that the data and information are of insufficient quality simply due to lack of the metadata. Metadata provides information about the submitted data. It documents how and when and by whom a particular set of data was collected, and how the data is formatted. Additional information concerning data quality, representativeness, and quantity considerations is provided in EPA's 2006 IR guidance.

EPA recommends that States include in their assessment methodologies a description of the rationale to be used in assigning waters to Category 3. In particular, EPA regulations require States to provide in their Section 303(d) list submissions a rationale for not using any existing and readily available water quality data and information in developing the list (40 CFR 130.7(b)(6)(iii)). EPA also expects that waters identified as impaired and listed on the 303(d) list in the previous reporting cycle will not be removed from the list and placed into Category 3 in the subsequent listing cycle unless the State can demonstrate good cause for doing so, consistent with EPA regulations (40 CFR § 130.7(b)(6)(iv)). The State should explain why the data and information that formed the basis for the original listing is no longer sufficient for determining that the water is still impaired.

Segment specific water quality monitoring information is an important, but not the only, source of information States rely on to make water quality standards assessments. EPA recognizes that States routinely employ a wide variety of sources of quality data and information when making these attainment decisions. For example, while not required by EPA, some states have placed waters into Category 5 based upon statewide advisories or the presumption that the pollutant source, particularly when from atmospheric deposition, is ubiquitous, and therefore uniformly impacting segments in large geographic areas.

EPA encourages States to ensure that they are collecting data that meet their assessment methodology procedures and work to expand assessment coverage for all waters in the State over time using a combination of targeted and randomized network designs and predictive models.

3. Circumstances and expectations for “*partial approval/further review pending*” determinations (deferral) on CWA Section 303(d) Lists

The “partial approval/further review pending” action is a tool EPA Regions may choose to use to expedite approval of State’s Section 303(d) lists where a single waterbody (or small number of waterbodies) remains the subject of discussion on its status. As described in the 2008 IR memorandum, “Regions may consider a partial approval ...and defer action on a small set of waters if additional discussion between EPA and the state is expected to resolve the disposition of those waters.” Additionally, the memorandum recommends that EPA and the relevant State develop a timeframe to resolve the final status of those waters. Where a determination has been made to do a partial approval, the 2008 IR memo indicates that “EPA’s decision memorandum should explain that EPA is deferring final action with respect to the State’s decision to not list certain waters and clearly identify the specific waters for which EPA is deferring action.” EPA introduced this tool to avoid circumstances under which States and EPA may enter into protracted discussions over the status of a few waters in the State and either the State would delay its submission, or EPA would delay its action pending resolution of the issue. The “partial approval/further review pending” action provides a mechanism that facilitates on-time

submission of a State's 303(d) list and on-time approval by EPA of the State's impairment/listing decisions for the vast majority (e.g., >95%) of the impaired waters, but also provides a limited timeframe for EPA and the State to attempt to resolve issues regarding the impairment status of a very small set of waters.

EPA considers that there are certain circumstances for which a "partial approval/further review pending" action may be appropriate. These circumstances may include, but are not limited to: (1) a recent change to a State's assessment methodology that has resulted in issues whether the State's submitted list includes all impaired waters, or (2) an expectation that the near term collection of additional data and information would resolve concerns over the data quality, adequacy, or representativeness for of certain waters whose status on the State's submitted list is in question. The above circumstances are not anticipated to be common, and the "partial approval/further review pending" option is not intended to simply postpone EPA's decision with respect to this small set of waters until the next reporting cycle.²

As discussed in section two above, States that use the IR format may assign waters to Category 3 if there is no, or insufficient, data and information to make a water quality attainment determination. For circumstances where there is an issue whether a water appropriately belongs in Category 3 and a State is expecting to have additional site-specific data and information within a short period of time that would help resolve the water's attainment status, it may be appropriate for EPA to consider a "partial approval/further review pending" action on the State's submitted list with regard to such water. However, in circumstances where the additional data or information will not likely be available for many months, EPA should make its final approval/disapproval decision on the State's list based on all existing and readily available water-quality related data and information.

Prior to making a decision to take a "partial approval/further review pending" action, the Region should attempt to reach an agreement with the State regarding when EPA will make its final decision on the water(s) pending additional review. Furthermore, EPA's decision memorandum should explain the circumstances that led to the partial approval, provide a clear identification of the waters awaiting further review, and the timeframe for EPA's final decision on those waters.

4. Using and Reporting on Statewide Statistical Survey Data in ATTAINS and the National Water Quality Inventory Report to Congress

Beginning in FY 2005, Congress appropriated Clean Water Act Section 106 grant funds to be used to improve State monitoring programs and to implement statistically-valid surveys of the Nation's waters. EPA recognizes the challenges in assessing all waters and supports the use of both statistical survey designs and targeted monitoring to cost-effectively meet the needs of CWA sections 305(b) and 303(d).

States have traditionally monitored only a small percentage of all the nation's waters (about 20% of streams and rivers, 40% of lakes, and 35% of estuarine waters) using site-specific, targeted monitoring approaches to focus limited monitoring resources on heavily used or problem waters.

² In the last three listing cycles, the "partial approval/further review pending" action has been used for fewer than half a dozen State lists.

These targeted assessments, while providing important site-specific information for many regulatory programs (e.g., TMDLs, NPDES permits, compliance and enforcement monitoring), are understandably limited in their spatial coverage of the entire State. Supplementing the results of the site-specific data with those of the Statewide Statistical Surveys provides a more comprehensive characterization of the conditions in State waters as a whole. This use of a combination of data types and analyses supports a more robust characterization of the status of the State's waters, consistent with CWA 305(b). This section of the CWA directs States to submit every two years a report that describes the water quality of all navigable waters in such State and an analysis of the extent to which all navigable waters in the State provide for aquatic life (protection and propagation of a balanced population shellfish, fish, and wildlife), and recreational uses (allow recreational activities in an on the water). Statistically-valid surveys offer a cost-effective and efficient way to fulfill CWA requirements, complement traditional monitoring designs, and support a broader range of management decisions.

EPA does not expect that monitoring data acquired through a probability-based survey be reported as part of a State's attainment decision. A State may consider data gathered as part of its probability survey, along with other data, to make site-specific attainment decisions consistent with the State's assessment and listing methodology. Survey data are intended to generate population estimates for waters throughout a basin or State; the individual sample results alone may not be appropriate to make an assessment decision for a specific site or assessment unit.

About 35 States currently implement Statewide statistical surveys as a component of their State ambient water quality monitoring programs. As States report the results of statistical surveys, EPA is developing ways to incorporate the results of those surveys in the National Water Quality Inventory Report to Congress as well as into the States' reporting tool -- the Assessment Database or compatible format -- and the national, publicly available water quality assessment database and website known as ATTAINS.

EPA will focus on Statewide statistical surveys for the purposes of nation wide reporting for the 2010 reporting cycle. We ask that States use a simple spreadsheet format (see Appendix) to report the results of their Statewide surveys. If States provide their statistical survey based data in this format, it will be relatively simple to load that information into the national database.

APPENDIX

Using and Reporting on Statewide Statistical Survey Data in ATTAINS and the National Water Quality Inventory Report to Congress

1) Reporting the Results of Statistical Surveys to EPA

The following are examples of how Statewide statistical survey results should be presented in spreadsheet format, along with some sample data. A spreadsheet template for submitting Statewide data is available at (insert url for the 2010 IR):

Statewide Attainment Results

ST	CYCLE	RESOURCE ASSESSED	SIZE UNIT	USE ASSESSED	TOTAL SIZE ASSESSED	STATE ATTAINMENT CATEGORY	SIZE IN ATTAINMENT CATEGORY	CONF LEVEL	LOWER CONF LEVEL	UPPER CONF. LEVEL	TOTAL # SITES
	2008	Rivers/Streams	Miles	Aquatic Life	32,000	Good	20,000	95% ± 10%	18,000	22,000	75
	2008	Rivers/Streams	Miles	Aquatic Life	32,000	Fair	5,000	95% ± 10%	4,500	5,500	75
	2008	Rivers/Streams	Miles	Aquatic Life	32,000	Poor	7,000	95% ± 10%	6,300	7,700	75

Statewide Causes of Impairment

ST	CYCLE	RESOURCE	SIZE UNIT	CAUSE NAME	STATE ATTAINMENT CATEGORY	SIZE IN ATTAINMENT CATEGORY	CONFIDENCE LEVEL	LOWER CONF	UPPER CONF
	2008	Rivers/Streams	Miles	Nitrogen	Good	10,000	95% ± 10%	9,000	11,000
	2008	Rivers/Streams	Miles	Nitrogen	Fair	2,000	95% ± 10%	1,800	2,200
	2008	Rivers/Streams	Miles	Nitrogen	Poor	4,000	95% ± 10%	3,600	4,400

States can also report confidence intervals for each reported value as part of their statistical survey reports. These confidence intervals will be represented on the State summary reports, but will not be represented on the national summary report.

Different States may use different terminology when describing statistical survey conclusions. They may, for example, identify waters as ‘Good’, ‘Fair’, ‘Poor’, and ‘Not Sampled.’ States will need to provide a translation or crosswalk of these condition classes into the national reporting categories of “Fully Supporting Uses,” “Not Supporting Uses,” and “Not Assessed,” as in the example below. Note that this does not address technical details of data and assessment comparability. This is a first step toward a more robust and defensible aggregation of State data into a nationally consistent and scientifically-valid assessment of the Nation’s waters using State water quality assessments.

Attainment Crosswalk Example

ST	CYCLE	STATE ATTAINMENT CATEGORY	NATIONAL ATTAINMENT
	2008	Excellent	Fully Supporting
	2008	Good	Fully Supporting
	2008	Fair	Not Supporting
	2008	Poor	Not Supporting

2) Reporting Statistical Survey Results to the Public through ATTAINS

The ATTAINS database was released in March 2008. This system was designed to incorporate and display both Section 305(b) and Section 303(d) reporting under the IR Guidance. To date, the focus of this system has been on the targeted monitoring conclusions that are reported by the States. The ATTAINS database tallies this information into Statewide, regional, and national summaries of the attainment status of assessed waters. ATTAINS currently only includes some assessment conclusions from Statewide statistical surveys. Several changes are being made to ATTAINS and national water quality reporting in order to accommodate, summarize and display the results of Statewide statistical surveys.

For Statewide Summaries: For each State providing data, Statewide statistical survey results will be included in ATTAINS as separate pie charts that will be followed by a series of charts showing assessment results from targeted monitoring. Text will be added to explain that the statistical survey results represent the condition of the resource (e.g., lakes, rivers and streams) Statewide and the targeted results reflect more intensive monitoring in specific waters.

For National Water Quality Reporting: For each State providing Statewide statistical survey results, EPA has developed an approach for using these data in national summary. This approach assumes that States will report *both* statistical survey and targeted monitoring assessment results to EPA.

- Designated Use Support: Individual Uses

If a State reports designated use support information for individual uses derived *both* from a statewide statistical survey and targeted monitoring, the report will reflect the statistical survey results because they are representative of the entire resource rather than the subset assessed by targeted monitoring.

For example, if a State's statistical survey data show that of their 32,000 miles of rivers, 12,000 are impaired for Aquatic Life Use and 20,000 are not impaired, then those numbers will be used in the national report (even though the State may *also* report that they assessed 8,000 miles for Aquatic Life Use Support using a targeted approach, and of those 4,000 were impaired).

If the same State also reports on other uses (such as Recreation) using only targeted monitoring data (and no statistical survey data exist for this use), then the targeted conclusions will be used for those respective uses.

- Designated Use Support: Overall

Statistical survey results will be used for the overall use attainment summary because they are representative of the conditions across the State for the water resource type.

- Causes of Impairment

For States that use both a statistical survey and targeted monitoring to identify the extent of waters affected by a given cause (e.g., sediment or nutrients), statistical survey results will be used for the overall use attainment summary because they are representative of the conditions across the State for the water resource type.

For example, if a State reports that its statistical survey finds sediment impairing 1,000 miles of stream, but targeted monitoring finds sediment impairing only 800 miles of stream, then the statistical survey finding -- 1,000 stream miles -- will be used for national reporting purposes. If causes of impairment are reported based only on targeted monitoring (i.e., no statistical survey data exist), then these targeted monitoring results will be used in the national summary.