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Subject: Follow-up to WDD Hot Issues Discussion on Reasonable Assurance in TMDLs

I want to thank you for your participation in our February 9 discussion of “reasonable assurance” demonstrations in TMDLs. As usual, you brought important insights and observations and comments to the table. In follow-up to our discussion, I’ve included below, a “supplemental information” sheet for reviewing reasonable assurance (RA) demonstrations that I previously distributed in July. This document does not revise current policies for RA demonstrations; rather, it is a useful tool your staff can use when reviewing proposed TMDLs. You or your staff might also incorporate these evaluation “check-points” into presentations to state partners to help them strengthen RA determinations in future TMDLs.

As discussed on the call, we will continue to support your efforts. We are compiling a set of TMDLs with good examples of RA determinations. We also are providing technical and financial support to several Regions for the development of ‘pilot’ TMDLs with sufficient RA. I thank the Regions who are working with us on these pilot TMDLs and encourage each Region to work with us to identify additional potential pilot TMDLs.

I appreciate the opportunity to work with you to strengthen reasonable assurance and make the TMDL program an even stronger tool for restoring impaired waters.

I look forward to our continuing discussions,

Denise

Supplemental Information for Reviewing Reasonable Assurance in TMDLs

What is reasonable assurance and why it is important:

- Reasonable assurance (RA) in the TMDL context means that when a TMDL is developed for waters impaired by both point and nonpoint sources (NPS), and the WLA is based on an assumption that NPS load reductions will occur, the TMDL should provide reasonable assurances that NPS control measures will achieve expected load reductions.
- RA ensures that a TMDL’s wasteload and load allocations are properly calibrated to meet the applicable water quality standards. Without such calibration, a TMDL’s ability to serve as an effective guidepost for water quality improvement is significantly diminished. Permits that rely on those TMDLs without adequate RA may be vulnerable.
- RA is also important to realizing future water quality and environmental gains.
- At least 45% (~32,000) of the potential future 70,000+ TMDLs will be for waters impaired by both NPS and PS, and thus subject to a demonstration of RA.
- RA demonstrations enhance the defensibility of TMDL actions. With thousands of waters remaining on CWA section 303(d) lists, it is important that the resulting TMDLs -- which will represent a significant expenditure of State and EPA resources -- be as defensible as possible.
- EPA recently took a remand and reversed its approval of the Lake Champlain (VT) nutrients TMDL, in part because we determined it lacked RA.

Background information on existing EPA guidance pertaining to reasonable assurance in TMDLs

1991 Guidance for Water Quality-based Decisions: The TMDL Process:

In addition, before approving a TMDL in which some of the load reductions are allocated to nonpoint sources in lieu of additional load reductions allocated to point sources, there must be specific assurances that the nonpoint source reductions will in fact occur. (page 2)

Under the CWA, the only federally enforceable controls are those for point sources through the NPDES permitting program. In order to allocate loads among both point and nonpoint sources, there must be reasonable assurances that nonpoint source loads will in fact be achieved. Where there are not reasonable assurances, under the CWA, the entire load reduction must be assigned to point sources. (page 15)

There must be assurances that nonpoint source control measures will achieve expected load reductions in order to allocate a wasteload to a point source with a TMDL that also allocates expected nonpoint source reductions. (page 22)

When establishing permits for point sources in the watershed, the record should show that in the case of any credit for future nonpoint source reductions, (1) there is reasonable assurance that nonpoint source controls will be implemented and maintained or (2) that nonpoint source reductions are demonstrated through an effective monitoring program. Assurances may include the application or utilization of local ordinances, grant conditions, or other enforcement authorities. For example, it may be appropriate to provide that a permit may be reopened for a WLA which requires more stringent limits because attainment of nonpoint source load allocation was not demonstrated. (page 24)

1997 memorandum New Policies for Establishing and Implementing Total Maximum Daily Loads, from then Assistant Administrator for Water, Robert Perciasepe:

In watersheds impaired by a blend of point and nonpoint sources, this TMDL Process guidance document provides that where any wasteload load allocation to a point source is increased based on an assumption that loads from nonpoint sources will be reduced, the State must provide "reasonable assurances" that the nonpoint source load allocations will in fact be achieved.

2002 Guidelines for Reviewing TMDLs Under Existing Regulations:

When a TMDL is developed for waters impaired by both point and nonpoint sources, and the WLA is based on an assumption that nonpoint source load reductions will occur, EPA's 1991 TMDL Guidance states that the TMDL should provide reasonable assurances that nonpoint source control measures will achieve expected load reductions in order for the TMDL to be approvable. This information is necessary for EPA to determine that the TMDL, including the load and wasteload allocations, has been established at a level necessary to implement water quality standards. (Review element #8)

Supplemental information for reviewing the Reasonable Assurance section in a TMDL

EPA's 2002 Guidelines for Reviewing TMDLs Under Existing Regulations provides a checklist for reviewing TMDLs. Specifically, review element #8 of the checklist states that a TMDL should provide reasonable assurance that NPS reductions will be achieved when the WLA is based on the assumption that NPS reductions will occur. The discussion below is intended to provide additional information about what to look for in a TMDL's demonstration of reasonable assurance. Each TMDL's demonstration of reasonable assurance is, of necessity, case-specific. The degree to which the following factors are addressed in a given TMDL will depend on the particular circumstances of that TMDL, including but not limited to the nature of the receiving waterbody, the type of pollutants causing the impairment, the relative mix of nonpoint and point source loadings, and the nature of the sources of those loadings.

1. Quantification of LA and WLA:

Does the TMDL clearly describe the analytical process used for calculating both the LA and the WLA(s)? In particular, for the LA, does the TMDL explain the process used to estimate the current NPS load by sector, and the

assumptions that were applied to estimate the expected NPS reductions by sector (e.g., type of BMPs, how many will be applied, their pollutant reduction efficiencies, etc.). For the WLAs, does the TMDL assign specific allocations to individual or categories of sources and explain the extent to which those WLAs are expected to be implemented in permits?

2. Linkage of WLA to LA

A fundamental statutory and regulatory principle of TMDLs is that the aggregate sum of the WLAs, when added to the aggregate sum of the LAs, must not exceed the assimilative capacity of the water body. Are the assumptions regarding how the WLA was calculated clearly explained? For example, is there a discussion of whether the WLA was based on the assumption that the LA would be achieved over time based on a schedule of NPS implementation, achievement of milestone measures, etc? Does the TMDL include an “assumption” that a permit based on a WLA might be reopened to include a more stringent WQBEL if attainment of nonpoint source load allocations was not achieved consistent with the TMDL’s reasonable assurance assumptions?

3. Discussions of schedule and milestones to achieve LA

It is difficult to ensure, a priori, that implementing nonpoint source controls will achieve expected load reductions. Nonpoint source control measures may fail to achieve projected pollution load reductions due to inadequate selection of BMPs (practices not applicable to a particular watershed), inadequate design or implementation, or lack of full participation by all contributing sources of nonpoint pollution. Does the TMDL provide an overall schedule for implementation of nonpoint source controls along with an adaptive management procedure for reviewing key milestone progress and revising BMPs, if necessary, to meet the TMDL target loads?

4. Discussion of monitoring and tracking approach to evaluate progress

The key objective for documenting load reduction goals and review procedures is to establish a rational procedure for site-specific evaluation of waterbodies with significant nonpoint source pollution loads. Does the TMDL indicate that the State is prepared to develop and implement a monitoring and reduction tracking system in order to facilitate adjustments to the initial set of BMP assumptions and to track the progress of NPS control implementation?

5. Discussion of follow-up actions

Does the TMDL describe potential follow-up actions under state, local, or Federal law, e.g., possibility of more stringent permit limits or more effective NPS controls, and when they would occur, if there is insufficient progress in the expected NPS control implementation?

References:

US EPA. Guidance for Water Quality-Based Decisions: The TMDL Process. EPA 440/4-91-001. April 1991.
http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/decisions_index.cfm

US EPA. Memorandum: New Policies for Establishing and Implementing Total Maximum Daily Loads (TMDLs). August 8, 1997.
<http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/ratepace.cfm>

US EPA. Guidelines for Reviewing TMDLs Under Existing Regulations Issued in 1992. May 20, 2002.
<http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/final52002.cfm>

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