



Upper Mississippi River Basin Association

ILLINOIS, IOWA, MINNESOTA, MISSOURI, WISCONSIN

May 28, 2010

Ms. Debby White
United States Environmental Protection Agency, Region 7
Water, Wetlands, and Pesticides Division
Water Quality Management Branch, MS River Arsenic
901 North 5th Street
Kansas City, Kansas 66101

RE: UMRBA Comments on Mississippi River Arsenic Total Maximum Daily Load

Dear Ms. White:

On behalf of the Upper Mississippi River Basin Association (UMRBA), I am offering this letter of comment on US EPA Region 7's March 2010 draft total maximum daily load (TMDL) for arsenic in two segments of the Mississippi River.

UMRBA is the Governor-established forum for interstate water resources planning and management in the Upper Mississippi River Basin, representing its member states of Illinois, Iowa, Minnesota, Missouri, and Wisconsin. UMRBA is therefore greatly interested in the implementation of the Clean Water Act (CWA) on the Upper Mississippi River (UMR) and has sought to encourage improvements in the consistency, rigor, and success of the Act's implementation on the River.

UMRBA offers the following comments in regard to Region 7's draft arsenic TMDL. These comments reflect the joint perspective of UMRBA's five member states, but are supplementary to, and do not substitute for, individual comments made by its member states.

Unclear Linkage between the Proposed TMDL and *Sailors, et al. v. EPA* Consent Decree

The draft TMDL states that "these two TMDLs are being established by EPA to meet the requirements of the Consent Decree, *Sailors, Inc., Mississippi River Revival*, and *Sierra Club v. EPA*, Consolidated Case No. C'98-134-MJM." However, there is little evidence that the consent decree compels the creation of an arsenic TMDL for the Mississippi River. The consent decree focuses on sediment, nutrients, and pesticides. It makes no explicit mention of arsenic. Further, Attachment A of the decree identifies a 10-year schedule for establishing TMDLs for the 157 waterbodies on Iowa's 1998 303(d) impairment list, but the two segments addressed under the draft TMDL were not listed for an arsenic-related impairment in 1998.

Additionally, to the extent UMR pools are explicitly addressed in the consent decree, it is entirely with reference to sediment and turbidity concerns. Specifically, the decree provides that "for any *sediment and/or turbidity* TMDLs for the [UMR] Pools included on the next Iowa Section 303(d) List pursuant to paragraph (1) above that Iowa has not established by December 15, 2009, EPA shall establish such TMDLs by June 15, 2011 subject to paragraph 5.A." (emphasis added). Clearly, the application of the consent decree to the UMR in this context is only with respect to sediment and turbidity issues.

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If, as a plain reading of the consent decree would indicate, there is no reason to link a Mississippi River arsenic TMDL to the consent decree deadlines, then ample time is available to appropriately address the technical, policy, and interstate issues raised by the draft TMDL. These issues are described in detail in the following paragraphs.

Technical and Policy Concerns with TMDL and Underlying Arsenic Criterion

UMRBA has a number of technical and policy concerns related to the TMDL, and the arsenic criterion underlying the TMDL, as follows:

Arsenic Criterion: The criterion underlying the TMDL, Iowa's arsenic (III) human health criterion for consumption of fish and water, is 0.18 micrograms per liter ($\mu\text{g/l}$). Meaningful implementation of this criterion is challenging at best, as it is a concentration that appears to be well below background concentrations resulting from the natural occurrence of arsenic in the soil. This is acknowledged in the text of the draft TMDL itself. Further, the criterion is not consistent with those of neighboring states bordering the UMR and is 1/56 the value of the drinking water maximum contaminant level of 10 $\mu\text{g/l}$ [$(1/56) \times 10 \mu\text{g/l} = 0.18 \mu\text{g/l}$]. Additionally, as discussed in the draft TMDL document, analytical detection limits for arsenic are often higher than the criterion level itself.

Determination of Use Impairment: Iowa's criterion of 0.18 $\mu\text{g/l}$ is specific for inorganic arsenic (III). As discussed in the draft TMDL, all the data used in making the impairment determination were total arsenic values. Therefore, it cannot be stated conclusively that the criterion has indeed been exceeded. The draft TMDL only addresses this issue in the context of an "implicit margin of safety" that is "equivalent to the quantity of arsenic (V) in the impaired segments." But the draft does not describe the expected contributions of arsenic (III) and arsenic (V) to total arsenic in the UMR, and therefore does not quantify the margin of safety. The expected relationship of the TMDL targets (set as total arsenic) to the actual reduction of arsenic (III) is thus unclear.

Zero Waste Load Allocation: Section 3.3.2 of the draft TMDL states that:

Measured arsenic concentrations in groundwater and soils throughout the Midwestern United States suggest that natural background sources significantly exceed the human health water quality target of 0.18 $\mu\text{g/L}$. Overall other anthropogenic sources of arsenic likely contribute only minor loads from isolated point and nonpoint sources that discharge directly or indirectly into the Mississippi River.

Despite this clear statement that anthropogenic sources are not significantly contributing to arsenic loading, the draft TMDL proceeds to establish a zero waste load allocation (WLA) for regulated point sources, using the following rationale:

Because the natural background concentrations of arsenic on these two river segments already exceed its water quality criterion, any addition of arsenic to a waste stream would therefore elevate the current exceedance of the water quality criterion. Therefore, the sum of waste loads for these segments is a WLA of zero pounds per day.

Whether a zero arsenic discharge by permit-holders is even technically feasible is questionable. Moreover, it is an unproductive and possibly inappropriate application of a TMDL to create extremely restrictive and likely unattainable permit conditions for point sources that are clearly not significantly contributing to the overall contaminant levels.

Identification of Non-Iowa NPDES-Permitted Facilities as Pollution Sources: The draft TMDL lists over 2,000 NPDES-permitted facilities outside the State of Iowa in its identification of pollution sources. The TMDL does not explicitly state whether or how the WLA determination would affect facilities outside of Iowa, but at minimum their inclusion implies some level of connection and raises the question of how WLA allocations should be considered for an interstate watershed and waterbody. This is an issue where further development of shared interstate approaches and understanding is needed, rather than simply adding all NPDES-permitted facilities within the watershed.

Applying TMDLs to Naturally Occurring Contaminants Undermines Program Credibility: Several of the technical and policy issues highlighted above result from the attempt to apply TMDLs to an impairment caused by a naturally occurring contaminant. The TMDL approach can be successful in helping control the loading of pollutants that result from human activities. However, using TMDLs to address naturally occurring contaminants can lead to problems in setting unattainable goals and mis-targeting of controls, as described above. Moreover, such a poorly suited TMDL application undermines the credibility of the TMDL program as whole and could thus be detrimental to water quality improvements efforts more broadly.

Interstate Issues and Considerations

The draft TMDL highlights the need for consistency in standards and approaches as the states and EPA Regions implement the CWA on the UMR. While UMRBA, its member states, and the EPA Regions have worked vigorously to increase CWA collaboration on the UMR in recent years, there are still significant differences to be addressed. This draft TMDL highlights one example of these differences, with no consistent criterion for arsenic among the UMR states and no parallel arsenic impairment listing or TMDL on the corresponding river reaches in Illinois. While this certainly is not the only case of disparity among the states on the UMR, the draft TMDL illustrates the need for consistent standards and approaches to arsenic, as well as other contaminants on the River.

UMRBA Recommends against Proceeding with the TMDL as Drafted, and Suggests an Alternate Approach

As drafted, the subject TMDL raises a number of significant technical and policy concerns, and also lacks clear linkage to the *Sailors, et al. v. EPA* consent decree. UMRBA therefore recommends that US EPA Region 7 not proceed with the TMDL as currently drafted.

Rather than pursuing the TMDL as proposed, UMRBA recommends that US EPA Region 7 work with the UMR states and US EPA Region 5 to address the issues raised by the draft TMDL. We believe such a coordinated effort could produce not only a more consistent and meaningful approach to arsenic, but might also serve as a foundation for critical progress in protecting human health more broadly on the UMR. UMRBA is certainly willing to aid this conversation and would

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welcome discussion with EPA regarding how to make this happen. Such an effort would be in keeping with UMRBA's ongoing interest and efforts in improving the implementation of the CWA on the UMR.

Thank you for this opportunity to provide comment. Should you have any questions or wish to discuss these comments, please contact Barb Naramore or Dave Hokanson of the UMRBA staff at 651-224-2880.

Sincerely,

A handwritten signature in black ink, appearing to read "Todd S. Ambs". The signature is fluid and cursive, with the first name "Todd" being the most prominent.

Todd Ambs, UMRBA Chair

cc: Timothy Henry, Associate Director, Water Division, US EPA Region 5
William A. Spratlin, Director, Wetlands, Watersheds, and Pesticides Division, US EPA Region 7