

## **Illinois EPA's Comments on U.S. EPA's Partial Disapproval of Illinois' 2008 303(d) List and U.S. EPA's Proposed 303(d) List for Illinois**

On December 29, 2008, the United States Environmental Protection Agency ("U.S. EPA") published a notice and request for comments in the Federal Register of its "Preliminary Listing of Additional Waters To Be Included on Illinois' 2008 List of Impaired Waters Under Section 303(d) of the Clean Water Act and Proposed Delisting of Boron Impairment for Segment E-26 of the Sangamon River." *See*, 73 Fed. Reg. 79482 (December 29, 2008)[FRL-8757-4]. The Illinois Environmental Protection Agency ("Illinois EPA" or "Agency") strongly objects to U.S. EPA's October 22, 2008 partial disapproval of the 2008 Illinois 303(d) List submission, and therefore submits the following comprehensive comments addressing U.S. EPA's decision regarding the Illinois EPA submission as well as the changes U.S. EPA proposes to make to that submission in the Federal Register notice. Illinois EPA expects that U.S. EPA will carefully consider all of these comments and address them in the final decision document.

On June 30, 2008, Illinois EPA submitted an "Integrated Water Quality Report and Section 303(d) List – 2008" to U.S. EPA Region 5 for approval. Although this submission consisted of over 500 pages of information, the Section 303(d) List itself is found in Appendix A-1 of the 2008 Integrated Report. In developing this list, Illinois EPA relied in part on U.S. EPA's Integrated Report Guidance (July 29, 2005) which establishes a five-part categorization system for surface waters in which only those waters placed into Category 5 constitute the State's 303(d) List.<sup>1</sup> Category 5 is also explained as water quality-limited segments for which "available data and/or information indicate that at least one designated use is not being supported or is threatened, and a TMDL is needed." *See*, U.S. EPA, Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Section 303(d), 305(b) and 314 of the Clean Water Act (2005) at page 47; Illinois Integrated Water Quality Report 2008 at pages 107-108.

In a cover letter dated October 22, 2008, U.S. EPA Region 5 informed Illinois EPA that "EPA disapproves the State's decision not to list additional water bodies (identified in attachment 1 of the decision document), because EPA finds that the waters and associated pollutants meet the federal requirements for listing under Section 303(d) at this time." *See*, Attachment A at page 1. U.S. EPA also states in its Decision Document that "[b]ased upon this review, U.S. EPA has determined that Illinois' list of impaired waters still requiring total maximum daily loads (TMDLs) does not meet the requirements of Section 303(d) of the Clean Water Act (CWA or Act), and U.S. EPA's implementing regulations." *See*, Attachment B at page 1. Illinois EPA agrees that

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<sup>1</sup> Category 1 is for waters where all designated uses are supported, Category 2 is for waters where some, but not all designated uses are supported (if the other uses are reported as "not assessed" or "insufficient information"), and Category 3 is for waters where there is insufficient data or information to make a use support determination for any use. Category 4 is for waters where at least one use is not supported, but a TMDL is not required and is made up of three subcategories. Category 4a is used for waters where TMDLs have been completed and approved by U.S. EPA (Illinois EPA only uses this category where approved TMDLs are in place for all pollutant causes of impairment in that water quality limited segment), Category 4b is for waters where technology-based effluent limits are stringent enough to implement applicable water quality standards within a reasonable period of time and Category 4c is for waters where failure to meet applicable water quality standards is not based on a pollutant but instead based on other types of pollution (usually habitat related conditions).

reliance on water quality standards not yet approved by U.S. EPA may be inconsistent with portions of the Clean Water Act and implementing regulations; however, in all other respects Illinois EPA disagrees with U.S. EPA's conclusion that its 2008 list of waters still requiring TMDLs does not meet the requirements of Section 303(d) of the Clean Water Act and U.S. EPA's implementing regulations.

### **Summary of Illinois EPA's Legal Argument Opposing U.S. EPA's Partial Disapproval of Illinois' 303(d) List and Proposed 303(d) List for Illinois**

U.S. EPA is exceeding its authority under the Clean Water Act and its own implementing regulations in its partial disapproval of Illinois EPA's submission of a 303(d) List for the State of Illinois. The Clean Water Act provides in Section 303(d)(1)(A) that "Each State shall identify those waters within its boundaries for which the effluent limitations required by section 1311(b)(1)(A) and section 1311(b)(1)(B) of this title are not stringent enough to implement any water quality standard applicable to such waters." Section 303(d)(2) of the Clean Water Act then provides that "Each State shall submit to the Administrator . . . for his approval the waters identified and the loads established under . . . this subsection. The Administrator shall either approve or disapprove such identification and load not later than thirty days after the date of submission." The unambiguous meaning of this Clean Water Act language is that U.S. EPA's authority under Section 303(d) of the Clean Water Act extends only to approval or disapproval of two specific submissions by the States. First, the list of waters where water quality standards will not be met and second, the loads established for the pollutants identified as causing water quality standards not to be met.<sup>2</sup> The action the U.S. EPA has actually taken in its Decision Document and its proposed decision to amend the Illinois 303(d) list is not a decision to list additional waters on Illinois' 303(d) List, because in most cases the water quality limited segment at issue is already included on the approved portion of the State's list. U.S. EPA is instead attempting to make changes to portions of the State of Illinois' list that are intended to be informational only under the Clean Water Act and not subject to U.S. EPA approval or disapproval.

U.S. EPA's exceedance of its authority under the Clean Water Act and implementing regulations has resulted in U.S. EPA applying water quality standards where none exist under State law and applying an inappropriate standard of review to Illinois' submission. U.S. EPA would require the Illinois EPA to show good cause under the 40 C.F.R. §130.7(b)(6)(iv) to make changes to its identification of pollutants that have been submitted for informational purposes, when U.S. EPA's regulations clearly provide that the only legitimate basis for invoking a 'good cause' showing is when a State has not included "a water or waters on the list." By expanding the 'good cause' review beyond failure to include a water quality limited segment on the 303(d) List and by applying this same showing to two pollutants (sedimentation/siltation and total

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<sup>2</sup> Courts have consistently held that U.S. EPA has only these two mandatory duties under this Section of the Clean Water Act. *See, Hayes v. Browner*, 117 F.Supp. 1182, 1194-1195 (D.C. N.D. OK 2000)(aff'd in *Hayes v. Whitman*, 264 F.3d 1017 (10<sup>th</sup> Cir. 2001)); *Friends of the Wild Swan v. U.S. EPA*, 130 F.Supp.2d 1184, 1191 (D. MT 1999); *NRDC v. Fox*, 93 F.Supp.2d 531, 558-59 (S.D.NY 2000)("In requiring EPA to perform this simple, binary duty, Congress left no room for EPA, or the Court, to define subsets of listed WQLSs that deserve differential treatment").

nitrogen) that are not included in Illinois' water quality standards and one non-pollutant (dissolved oxygen), U.S. EPA is attempting to disapprove the Illinois EPA's assessment methodology itself rather than the 303(d) List.

In order to sustain its proposed decision, U.S. EPA must conclude in its final decision that the percent silt/mud and total nitrogen guidelines used in Illinois EPA's 2006 Integrated Report methodology meet the definition of a water quality standard under Section 303(c) of the Clean Water Act. If U.S. EPA makes such a finding in its final decision, U.S. EPA then has a mandatory duty to take the necessary procedural steps to make these guidelines effective and enforceable water quality standards under State and Federal Law.

### **Illinois EPA's Substantive and Procedural Comments on U.S. EPA's Partial Disapproval of Illinois' 303(d) List and Proposed 303(d) List for Illinois**

#### **Good Cause Demonstration**

On pages 14 – 16 of its Decision Document (Attachment B), U.S. EPA discusses the legal basis for its partial disapproval decision. U.S. EPA claims on page 14 that “A state can remove WQLSs (or waterbody/pollutant combinations) from the 303(d) List for good cause” and references some examples of ‘good cause’ under 40 C.F.R. 130.7(b)(6)(iv). This is not a correct statement of the applicable legal standard in this case for at least three reasons. First, a State does not have to automatically show good cause in every case. Second, this showing only applies to removing a water or water quality limited segment from the 303(d) List, it does not apply to changes to “waterbody/pollutant” combinations as U.S. EPA claims. Third, even if it did apply to changes to the identification of potential pollutant causes of water quality standard violations, it certainly would not apply to the removal of a non-pollutant cause like dissolved oxygen or pollutants for which no applicable water quality standard exists.

There is no mention in the Clean Water Act of a state being required to make a good cause demonstration to remove a water or waters from its 303(d) List. There is also no requirement in the Clean Water Act for States to identify pollutants that may be causing violations of water quality standards. The only requirement to identify pollutants found in the Clean Water Act is the requirement in 303(d)(1)(C) that U.S. EPA identify which pollutants are suitable for Total Maximum Daily Load calculations.<sup>3</sup> The provision that asks States to identify pollutants in its 303(d) List is found in 40 C.F.R. §130.7(b)(4):

The list required under §§130.7(b)(1) and 130.7(b)(2) of this section shall include a priority ranking for all listed water quality-limited segments still requiring TMDLs, taking into account the severity of the pollution and the uses to be made of such waters ***and shall identify the pollutants causing or expected to cause violations of the applicable water quality standards.*** The priority ranking shall specifically

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<sup>3</sup> In 1978, U.S. EPA responded to this directive to identify pollutants suitable for TMDL calculations by finalizing the following determination “EPA is identifying all pollutants, under proper technical conditions, as suitable for the calculation of total maximum daily loads.” 43 Fed. Reg. 60662 (December 28, 1978).

include the identification of waters targeted for TMDL development in the next two years. (emphasis added).

As explained more fully below, dissolved oxygen does not meet the definition of a pollutant under this regulatory language, and Illinois EPA's previous methodology inaccurately resulted in the identification of pollutants that were not "causing or expected to cause violations" of any applicable water quality standards.

Despite these factors, U.S. EPA is attempting to invoke the requirement that Illinois show good cause to make the changes to the 2008 Illinois 303(d) List. The provision U.S. EPA is relying on is found in 40 C.F.R. §130.7(b)(6) and states as follows:

(b)(6) "Each State shall provide documentation to the Regional Administrator to support the State's determination to list or not to list its waters as required by §§130.7(b)(1) and 130.7(b)(2). This documentation shall be submitted to the Regional Administrator together with the list required by §§130.7(b)(1) and 130.7(b)(2) and shall include at a minimum:

(i) A description of the methodology used to develop the list; and

(ii) A description of the data and information used to identify waters, including a description of the data and information used by the State as required by §130.7(b)(5); and

(iii) A rationale for any decision to not use any existing and readily available data and information for any one of the categories of waters as described in §130.7(b)(5); and

(iv) Any other reasonable information requested by the Regional Administrator. **Upon request by the Regional Administrator, each State must demonstrate good cause for not including a water or waters on the list. Good cause includes, but is not limited to, more recent or accurate data; more sophisticated water quality modeling; flaws in the original analysis that led to the water being listed in the categories in §130.7(b)(5); or changes in conditions; e.g., new control equipment, or elimination of discharges.** (emphasis added).

U.S. EPA identifies in its Decision Document the six reasons invoked by Illinois EPA for removing water quality limited segments from the Illinois 303(d) List. Attachment B at 14. These six reasons are: the assessment and interpretation of more recent or more accurate data in the record demonstrate that the applicable water quality standards are being met; the results of more sophisticated water quality modeling demonstrate that the applicable water quality standards are being met; flaws in the original analysis of data and information led to the segment being incorrectly listed; documentation that the state included on previous Section 303(d) List an impaired segment that was not required to be

listed by U.S. EPA regulations (e.g., segments where there is no pollutant associated with the impairment); approval or establishment by U.S. EPA of a TMDL since the last Section 303(d) List; and other relevant information that supports the decision not to include the segment on the Section 303(d) List. In its analysis, U.S. EPA focuses on only one of these factors – flaws in the original listing – with regard to the dissolved oxygen as a non pollutant, total nitrogen, and sedimentation/siltation changes to Illinois’ 303(d) List.

Although U.S. EPA provides six potential factors relied on, it analyzes only one of these factors: flaws in the original listing. However, for individual water quality limited segments, Illinois has relied on multiple factors in addition to the flaw in the original listing in making changes to the 303(d) List including more recent data demonstrating that water quality standards are being met and approval or establishment by U.S. EPA of a TMDL since the last Section 303(d) List. *See*, Attachment E.

*U.S. EPA’s Region 5 Administrator Did Not Request a Good Cause Demonstration from Illinois EPA*

In addition to the substantive belief that a good cause showing is not required for the types of changes being made to the Illinois 303(d) List, Illinois EPA does not believe that U.S. EPA followed its own procedures to invoke such a showing. 40 C.F.R. §130.7(b)(6)(iv) clearly requires that a good cause showing is preceded by a request from the Regional Administrator. There is no documentation in the Record that the Regional Administrator (or even his or her delegate) has requested a showing from Illinois EPA for good cause to remove waters from the State’s 303(d) List.

A careful review of the formal and informal correspondence between Illinois EPA and U.S. EPA Region 5 staff indicate the requests for more information and the supplementary information provided did not rise to a level to make this showing that U.S. EPA invoked the requirement that Illinois EPA was expected to make a good cause demonstration. From a rigidly procedural point of view, U.S. EPA can point to no document from the Regional Administrator asking for this type of documentation. Beyond this, however, the informal requests from subordinate staff were clearly targeted at understanding the Illinois EPA’s assessment methodology and evaluating the reasonableness of this methodology, not documenting good cause for removal of specific waters from the 303(d) List. Illinois EPA has identified numerous errors in the Tables contained in Attachments 1 and 2 of U.S. EPA’s Decision Document (Attachment B) which form the basis for U.S. EPA’s proposed changes to Illinois’ 303(d) List. The Agency has attempted to summarize these errors in tabular form in Attachment E. It is likely that the two agencies would have been able to resolve these errors had Illinois EPA been asked to make a good cause demonstration before U.S. EPA made the proposed decision to place additional information on Illinois’ 303(d) List. For example, a request for a good cause showing for these segments would have certainly resulted in identifying those segments that were removed from Illinois’ 303(d) List because water quality standards are currently being met or because U.S. EPA has approved a TMDL since the 2006 Illinois 303(d) List.

Another line of evidence that demonstrates U.S. EPA never asked Illinois EPA for a good cause showing is a review of the correspondence regarding the changes to Illinois

EPA's methodology for sedimentation/siltation. *See*, Attachment F. In U.S. EPA's review of Illinois EPA's supplemental information, the words "good cause" are never invoked. It is clear from a review of that document (which was prepared after U.S. EPA's October 22, 2008 decision had been made) that U.S. EPA reviewing staff believed they were reviewing the appropriateness or the reasonableness of the use of a 34% silt/mud guideline or a 75% silt/mud guideline in Illinois EPA's Integrated Report assessment methodology.

A good cause showing is not required under the Clean Water Act, and U.S. EPA's implementing regulations only require a good cause showing for a decision to remove waters from the 303(d) List (not to change identification of potential pollutant causes). Even where such a showing is required, it must initiate with a request from the Regional Administrator and no such request has been made in this case. For these reasons, U.S. EPA does not have authority to disapprove the Illinois 303(d) List or propose changes to that list based on a failure to show good cause.

### **U.S. EPA's Partial Disapproval of Illinois' 303(d) List and Proposed 303(d) List for Illinois for Total Nitrogen and Sedimentation/Siltation**

In the 2008 Integrated Report, Illinois EPA explains changes in two specific methods used previously in the 2006 report. First, Illinois EPA stopped using "total nitrogen" as a potential pollutant cause of aquatic life use impairment based in part on the fact Illinois does not have a water quality standard applicable to total nitrogen. Second, Illinois EPA changed one of the several guidelines used to identify excessive sedimentation/siltation as a potential pollutant cause of aquatic life use impairment. In its Decision Document, U.S. EPA disapproves both of these changes and is proposing to make changes to Illinois' 303(d) List as a result of these disapprovals.

Section 303(d)(1)(A) of the Clean Water Act provides that "Each State shall identify those waters within its boundaries for which the effluent limitations required by section 1311(b)(1)(A) and section 1311(b)(1)(B) of this title are not stringent enough to implement any water quality standard applicable to such waters." In 40 C.F.R. §130.7(b)(3), U.S. EPA regulations provide as follows: "For the purposes of listing waters under §130.7(b), the term 'water quality standard applicable to such waters' and 'applicable water quality standards' refer to those water quality standards established under section 303 of the Act, including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements." These definitions do not include pollutants that do not have criteria associated with them and the potential causes of total nitrogen and sedimentation/siltation do not meet this definition under the Illinois regulations or Section 303(c) of the Clean Water Act. *See*, 35 Ill. Adm. Code Part 302. To sustain its proposed decision, U.S. EPA must first conclude that the guidelines used by Illinois EPA for these two substances meet the definition of a water quality standard under the Clean Water Act and U.S. EPA must then take the necessary procedural steps to make these guidelines effective and enforceable water quality standards under state and federal law.

Section 303(d)(2) of the Clean Water Act provides that "Each State shall submit to the Administrator . . .for his approval the waters identified and the loads established under . . .this subsection. The Administrator shall either approve or disapprove such identification and load not later than thirty days after the date of submission." The

unambiguous meaning of the Clean Water Act language clearly states that U.S. EPA's authority under Section 303(d) of the Act extends only to approval or disapproval of two specific actions by the States. First, the list of waters in which water quality standards will not be met, and second, the loads established for the pollutants identified as causing applicable water quality standards not to be met.<sup>4</sup> 40 C.F.R §130.7 (b)(4) provides that the 303(d) List "shall include a priority ranking for all listed water quality-limited segments still requiring TMDLs, taking into account the severity of the pollution and the uses to be made of such waters and shall identify the pollutants causing or expected to cause violations of the applicable water quality standards." The fact that information regarding pollutants causing violations of applicable water quality standards must be submitted to U.S. EPA as a part of the 303(d) listing process does not (and can not) change the authority granted to U.S. EPA under the Clean Water Act. Congress has not given U.S. EPA the authority to make a determination approving or disapproving the potential causes of violations of water quality standards identified by the States. In many cases, the distinction makes little difference, because the potential pollutant causes of water quality standards violations often are also a water quality standard violation. However, in the cases at hand, Illinois EPA does not have any water quality standards (numeric or narrative) for total nitrogen (nitrate/nitrite concentration) or sedimentation/siltation (percent silt/mud).

U.S. EPA has taken the position that its role in the 303(d) approval process includes evaluating whether States have taken into account the statutory factors in establishing their priority rankings, but U.S. EPA is not responsible for approving the priority rankings themselves.<sup>5</sup> Similarly, U.S. EPA does not have authority under the Clean Water Act to approve or disapprove of the information submitted by States identifying which pollutants may be causing or expected to cause violations of applicable water quality standards. This is especially the case where, as here, the pollutant information submitted by the State has not been correlated to a water quality standard that is not being met or is expected to not be met. U.S. EPA has also consistently taken the position that its role in reviewing assessment methodologies developed by the States is evaluating whether or not the methodology is "reasonable." The result of U.S. EPA's proposed action goes beyond this traditional role, as it attempts to disapprove changes to the Illinois assessment methodology rather than the 303(d) List itself.

Under 40 C.F.R. 130.7(b)(6)(iv), U.S. EPA's regulations provide that "Upon request by the Regional Administrator, each State must demonstrate good cause for not including a water or waters on the list. Good cause includes, but is not limited to, more recent or accurate data; more sophisticated water quality modeling; flaws in the original

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<sup>4</sup>As the Supreme Court stated in Chevron, "the court, as well as the agency, must give effect to the unambiguously expressed intent of the Congress." Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837 at 842-43 (1984).

<sup>5</sup>In Sierra Club v. Leavitt, 393 F.Supp.2d 1263, 1273 (N.D. Fla. 2005), EPA argued that "EPA is not required to approve or disapprove the order in which states place their impaired waters." Although this opinion was vacated and remanded by the 11<sup>th</sup> Circuit in Florida Public Interest Research Group Citizen Lobby, Inc. v. EPA and Florida Department of Environment, 386 F.3d 1070 (11<sup>th</sup> Cir. October 4, 2004), the Circuit Court appeared to accept EPA's argument when it remanded the case for a showing that U.S. EPA had evaluated whether Florida considered the statutory factors in establishing its priority ranking, but did not remand for approval or disapproval of the priority ranking itself.

analysis that led to the water being listed in the categories in §130.7(b)(5); or changes in conditions; e.g., new control equipment, or elimination of discharges.” As explained above, it is not clear that U.S. EPA formally exercised this provision by requesting additional information from the Illinois EPA. However, even if U.S. EPA did make such a request, the requirement to show good cause only attaches to a decision to not include a water or waters on the state’s 303(d) List. Illinois EPA is not required to demonstrate good cause to make changes to potential causes of impairments. U.S. EPA has exceeded its authority under the Clean Water Act and its own implementing regulations by invoking this provision as a basis for partial disapproval and proposed changes to the Illinois 303(d) List. But even if a court were to determine that a good cause showing was required in this instance, Illinois EPA has clearly met the burden to show good cause for making the changes to total nitrogen and sedimentation/siltation in its 2008 Integrated Report as described below.

#### **A. Total Nitrogen**

The Decision Document states that “U.S. EPA disagrees with the removal of the [Total Nitrogen] cause of impairment. While [Illinois] EPA does not have a numeric standard for [Total Nitrogen] related to the aquatic life use, the waters are impaired for aquatic life use and [Illinois] EPA identified total nitrogen as a pollutant.” Attachment B at 11. As U.S. EPA correctly points out in its Decision Document “The methods, criteria and the manner in which nitrogen was reported as a cause of impairment of the aquatic life use have changed many times over previous assessment cycles.” Attachment B at 11. However, through all of these changes, Illinois has never used total nitrogen to assess attainment of aquatic life use and has not listed any water quality limited segments on its 303(d) List based on total nitrogen levels.

Where waters are impaired for aquatic life use they have been properly listed as such in the 2008 Integrated Report and 303(d) listing. In most cases, the waters at issue for changes to the total nitrogen methodology are already found in Category 5/Appendix A-1; therefore, these waters are listed on the 303(d) List. U.S. EPA has no authority to add causes of impairment to the state’s 303(d) List or to require Illinois to show “good cause” for making changes to the process of identifying which pollutants may be causing the failure to meet applicable water quality standards.

#### *State Water Quality Standard Development*

As U.S. EPA states, “U.S. EPA is working with [Illinois EPA] to develop nutrient criteria which should address the level used to determine if the use is impaired by the total nitrogen.” Attachment B at 11. Illinois EPA agrees that when a scientifically defensible criterion can be developed for the level of nitrogen that is necessary to protect aquatic life in Illinois, an appropriate General Use water quality standard will be proposed to the Illinois Pollution Control Board for adoption. Once such a standard is adopted and approved by U.S. EPA, attainment of this standard will be addressed by Illinois EPA. Illinois EPA has been working to develop nutrient standards for surface waters for several years. This effort has included university-directed research projects, collection of algae and dissolved oxygen data, expert and public workgroups, and



participation on regional nutrient standard development assistance groups. It has become apparent that the processes and mechanisms by which nutrients impact biological communities in the predominantly agricultural watersheds of the lower Midwest are complicated and confounded by environmental characteristics and land-use practices, including morphology, soils and sediments, stream and riparian habitat, stream flow, natural and anthropogenic inorganic turbidity and agricultural production activities. Most of the work with nutrient standards over the past several years has focused on phosphorus because it is typically thought to be the limiting nutrient in most stream systems and the one that would have the greatest impact on aquatic life in Illinois streams.

Recent nutrient studies (conducted by several universities and research agencies) have largely found relationships between nutrient concentrations and aquatic life use impairment to be inconclusive. These studies have failed to find consistent and reliable relationships between nutrient concentrations → algal and aquatic plant growth → dissolved oxygen concentrations → and biological community (or organism) health. Stating that total nitrogen is a cause of aquatic life use impairment is linking one end of this relationship to the other without considering transitional cause-and-effect processes.

#### U.S. EPA's Nutrient Criteria Guidance Documents

U.S. EPA's reference to ecoregional nutrient criteria documents developed by U.S. EPA is misplaced in this instance. *See*, Attachment B at 11. These recommended criteria are not laws or regulations – they are guidance that states may use as a starting point for the development of their water quality standards.<sup>6</sup> U.S. EPA can not require a state to rely on these criteria documents if they have not been adopted as a state water quality standard. If U.S. EPA believes the Illinois standards are deficient, a process exists for addressing such a deficiency under Section 303(c) of the Clean Water Act.

In addition, U.S. EPA provides information regarding the Ecoregion 54 criteria even though the criteria would not be applicable to many parts of the State of Illinois. The data set U.S. EPA used to derive the statistical concentrations for Ecoregion 54 did not use any Illinois EPA ambient water quality monitoring network data. Most of the data used by U.S. EPA for this ecoregion came from the USGS National Stream Quality Accounting Network and was collected in the early to mid-1990s. At the time, all of the sites in this network were located in the downstream reaches of the larger rivers (e.g., Mississippi, Illinois, Sangamon, Embarrass, Spoon, Big Muddy). Consequently, the appropriateness of using the data from these locations to represent all streams in the ecoregion is questionable. There can be substantial seasonal variation in nutrient concentrations, and selecting a percentile of all concentrations is not appropriate for setting nutrient standards or as a basis for listing waters. For instance, in U.S. EPA's criteria document, Appendix B, nitrate + nitrite nitrogen concentrations range from 0.003 to 14.00 mg/L<sup>7</sup> for Ecoregion 54. The lowest concentrations were found in the fall and the highest concentrations were found in the spring. Relatively low concentrations were

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<sup>6</sup>“As for guidance documents, they can modify neither statutes nor regulations.” *Sierra Club v. Meiburg*, 2002 WL 1426554 at 10 (11<sup>th</sup> Cir. 2002).

<sup>7</sup> This figure is a correction to the figure 0.115 mg/L to 10.65 mg/L which was incorrectly cited in the U.S. EPA Decision Document, Attachment B to these comments, at page 11.

found in the summer, when the impacts on aquatic life would be expected to be greatest. The criteria document does not list the 85<sup>th</sup> percentile for nitrate + nitrite nitrogen (which is the value upon which Illinois EPA has previously listed nitrogen as a potential cause of aquatic life use impairment), but it does list the 75<sup>th</sup> percentile, which is relatively close to the 85<sup>th</sup> percentile. The 75<sup>th</sup> percentiles for Fall, Spring, Summer, and Winter are 2.45, 7.80, 5.30, and 7.23 mg/L, respectively. Obviously, there is a wide seasonal range in concentrations – with the highest concentrations occurring in winter and spring. There is no scientific basis for U.S. EPA to require Illinois EPA to use a long-term, year-round based percentile to determine when nitrate + nitrite nitrogen concentrations are impairing aquatic life use.

### *Flaws in Illinois EPA's 2006 Total Nitrogen Methodology*

The method used by Illinois to identify total nitrogen as a potential pollutant cause of aquatic life use impairment in the 2006 cycle has no scientific validity. Illinois developed this method merely as a means of gaining consistency among assessors in different regions. The guidelines were never shown to have any relationship to aquatic life use impairment and were not used to assess attainment of that use. For streams, Illinois looked at more than 287,000 samples of nutrients from 1978 through 1996 from its ambient water quality monitoring network, which included 212 stations across the state. The value of 7.8 mg/L nitrate/nitrite was chosen by simply selecting the 85<sup>th</sup> percentile value of all nitrate/nitrite results in this dataset. However, no analyses were conducted to determine if any relationship existed between this criterion and aquatic life use, or if any value of nitrate/nitrite could be related to aquatic life use impairment. A recent review of this same dataset showed that the levels of nitrate/nitrite where aquatic life use is attained are higher than the levels in streams not supporting aquatic life use. For example, the 85 percentile value of streams that attained aquatic life use was 8.8 mg/L of nitrate/nitrite compared to 6.2 mg/L in impaired streams. The median value of nitrate/nitrite where aquatic life use was attained was twice the level of streams assessed as not supporting aquatic life use (3.4 mg/L compared to 1.7 mg/L). Data further showed that 70 percent of streams attaining aquatic life use had at least one sample above 7.8 mg/L nitrate/nitrite.

Within this data set there were ten streams rated as 'A' streams by Illinois' Biological Stream Characterization system. This system rates streams based on biological integrity, and 'A' streams are considered the best streams in the state from a biological integrity standpoint. And yet, the 85<sup>th</sup> percentile of nitrate/nitrite values for these 'A' streams is 12.0 mg/L. The median value of nitrate/nitrite for these 'A' streams is 5.55 mg/L, more than three times higher than the median nitrate/nitrite value for streams not supporting aquatic life use. Eight of these ten 'A' streams had at least one value of nitrate/nitrite that was higher than 7.8 mg/L. This dataset clearly does not support the use of a 7.8 mg/L nitrate/nitrite concentration for listing total nitrogen as a cause of aquatic life use impairment in streams. Furthermore, the relationship found in this particular dataset between nitrate/nitrite and aquatic life use is a positive one. On page 11 of Attachment B, U.S. EPA states Illinois EPA "has no evidence to show that total nitrogen is not connected to the biological impairment." However, analysis of the very dataset that Illinois EPA used to develop the previous total nitrogen methodology

provides evidence that nitrogen is not connected to biological impairment in Illinois waters. For this reason, Illinois is justified in concluding that the basis of its listing of total nitrogen as a potential pollutant cause of aquatic life use impairment was a flawed methodology and that all such listings should be removed.

U.S. EPA states on page 16, “U.S. EPA disagrees with [Illinois] EPA’s rationale for removing [Total Nitrogen] as a cause of impairment. U.S. EPA does not find that [Illinois EPA] has provided good cause for delisting [Total Nitrogen] as a cause of impairment.” Illinois EPA does not believe U.S. EPA has used the appropriate standard of review in this case. Changes to a state’s listing methodology should be reviewed for reasonableness only. Illinois EPA has clearly demonstrated the reasonableness of this change to its methodology. In addition, even if a good cause showing were required, Illinois would have met the requirements in 40 C.F.R. §130.7(b)(6)(iv)<sup>8</sup> for showing good cause by explaining the flaws in the previous methodology. It seems clear that the good cause standard must be met when a state changes its methodology to reflect proper use of water quality standards as Illinois has done in this case.

Illinois EPA is concerned about negative impacts of nitrogen in Illinois waters. Illinois EPA uses the ammonia nitrogen water quality standard for determining impacts to aquatic life from the toxic effects of ammonia nitrogen. In addition, Illinois EPA uses a 10 mg/L nitrate/nitrite standard for determining impairments to drinking water use. However, the Agency believes there currently are no scientifically valid criteria which can be used to accurately assess when there are non-toxic impairments to aquatic life use from nitrogen.

If total nitrogen remains on the Illinois 2008 303(d) List as a pollutant cause of impairment, a TMDL for this pollutant would be required for these impaired waters even though Illinois EPA does not believe there is a scientifically valid numeric criterion on which to base such a TMDL. Under Section 303(d) of the Clean Water Act, when U.S. EPA disapproves the removal of a water quality limited segment from the State’s 303(d) List, U.S. EPA will then be required by the Clean Water Act to develop the TMDL. In this case, U.S. EPA will have to establish a load allocation to achieve a water quality standard that has not been adopted by Illinois or approved by U.S. EPA.

In order to sustain its proposed decision, U.S. EPA must conclude that the total nitrogen guideline of 7.8 mg/L nitrate/nitrite meets the definition of a water quality standard under the Clean Water Act and U.S. EPA must then take the necessary procedural steps to make this guideline an effective and enforceable under both state and federal Law.

*Flaws in U.S. EPA’s Proposed List of Total Nitrogen Waters (Table 4)*

U.S. EPA claims on pages 15-16 of the Decision Document that Illinois EPA “delisted total nitrogen as a cause of impairment for 191 water bodies. Most of the

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<sup>8</sup> 40 C.F.R §130.7(b)(6)(iv) provides that “Upon request by the Regional Administrator, each State must demonstrate good cause for not including a water or waters on the list. Good cause includes, but is not limited to, more recent or accurate data; more sophisticated water quality modeling; flaws in the original analysis that led to the water being listed in the categories in §130.7(b)(5); or changes in conditions; e.g., new control equipment, or elimination of discharges.”

waters remained in Category 5 for other pollutants; however, nine had been moved to Category 4C.” According to Illinois EPA’s analysis, of the 191 waters listed in Table 4 of Attachment 1 to U.S. EPA’s Decision Document (Attachment B to these comments), 14 total segments are being removed from Illinois’ 303(d) List of impaired waters. Five of these are being removed because new information indicates that aquatic life use and all other uses are now fully supported. Nine others were moved to category 4C because data and information from these segments indicated no water quality standards violations were present and that aquatic life use impairment was due to pollution, not pollutants. For those waters that remained on Illinois’ 303(d) List, total nitrogen was removed as a potential pollutant cause of impairment in 11 cases because new data show the old cause guideline was not exceeded. *See*, Attachment E. If U.S. EPA does not accept Illinois EPA’s comments regarding the lack of authority to make the proposed changes to Illinois’ 303(d) List, these inconsistencies must be addressed by U.S. EPA in its final decision document.

## **B. Sedimentation/Siltation**

U.S. EPA claims on page 12 of the Decision Document (Attachment B) that Illinois EPA “changed the methodology for determining when a waterbody is impaired due to siltation/sedimentation.” While on page 16 of the Decision Document, U.S. EPA states that Illinois EPA “removed 23 impairments due to sedimentation/siltation based on the new listing methodology.” The basis for disapproval in the Decision Document simply states “U.S. EPA considers > 75% coverage high” and Illinois EPA “has not provided adequate support to show that this revision to its methodology will identify all waters impaired by sediments.” Attachment B at 12. It is not accurate to state that Illinois EPA removed impairments from the 303(d) List as a result of this change. U.S. EPA points to no water quality standard violations that Illinois EPA has removed from the 303(d) List. Making a change in the methodology for identifying potential pollutant causes of impairment should not be equated to removal of an “impairment” in the absence of a water quality standard that is being exceeded. U.S. EPA’s finding regarding sedimentation/siltation is an *ultra vires* attempt to disapprove the State’s assessment methodology itself in the guise of partial disapproval of the State’s 303(d) List.

Illinois EPA believes this portion of the partial disapproval is not consistent with the Clean Water Act. Illinois EPA’s obligation is to list all waters where water quality standards will not be met. Disagreement with the conclusions regarding the reasons for the failure to meet water quality standards is not equivalent to a disagreement with the State’s conclusions regarding whether or not the water quality standards are being met. U.S. EPA has not identified any waters it believes are not supporting the aquatic life designated use and not listed on the 303(d) List or violating a water quality standard adopted for the protection of that use and not listed by Illinois EPA. Absent such a finding, U.S. EPA does not have authority to change the state’s conclusions regarding which pollutants may be resulting in failure to attain aquatic life uses. It is clear from the Clean Water Act and implementing regulations that U.S. EPA’s disapproval authority extends only to failure to list waters or water quality limited segments that will not attain water quality standards after implementation of the effluent limitations required by state and federal law. *See*, Clean Water Act Section 303(d) and 40 C.F.R. §130.7(d)(1) and

(2). U.S. EPA has not shown that Illinois' 303(d) List and accompanying submission of additional documentation does not meet the Clean Water Act or applicable regulations.

U.S. EPA states in its Decision Document that "U.S. EPA does not agree with [Illinois EPA] revised methodology, and concludes that [Illinois EPA] has not provided good cause for removing sedimentation/siltation as a cause of impairment based on 'flaws in original listing.'" Attachment B at 16. As discussed above regarding total nitrogen, U.S. EPA is articulating the wrong standard of review for sedimentation/siltation when it claims the Illinois EPA must show good cause to change the methodology for determining when sedimentation/siltation should be listed as a potential pollutant cause of impairment. This argument is even more pointed in this case, where Illinois EPA is not removing the potential pollutant cause entirely, but simply changing the methodology for determining when sedimentation/siltation may be causing an aquatic life use problem. When reviewing methodology changes such as the percent silt/mud guideline, U.S. EPA evaluates whether the corrections to the State's methodology are reasonable. The language referenced in 40 C.F.R. §130.7(b)(6)(iv) does not apply to methodology changes unrelated to water quality standards. Even U.S. EPA seemed to have recognized this in its Evaluation of Integrated Report Assessment Methodology of the sedimentation/siltation issue which evaluates the "reasonableness" or "appropriateness" of Illinois EPA's percent silt/mud guidelines, but never references whether a "good cause" showing was requested from Illinois EPA, is required, or has been met. *See*, Attachment F.

In order to better understand why U.S. EPA's Disapproval Decision and changes to Illinois' 303(d) List are outside the authority granted to U.S. EPA by Congress in the Clean Water Act, it's important to discuss in more detail the procedures Illinois EPA has used for this parameter, the basis for the methodology change and how U.S. EPA has evaluated and interpreted that change. Attachment G provides more detailed technical information on how this information has been used in the assessment process in the 2008 cycle and prior cycles. Shortly before publication of the proposed decision in the Federal Register, U.S. EPA provided an Evaluation of Integrated Report Assessment Methodology for its disapproval of the sedimentation/siltation methodology. That review is included as Attachment F to these comments.

For the first time, U.S. EPA attempts to state on page 1 of Attachment F that "The 2008 assessment methodology indicates that the silt/mud habitat metric is used to identify a cause of impairment based on the narrative criterion – waters shall be free from bottom deposits other than natural origin." Following this sentence, U.S. EPA Region 5 cites to 35 Ill. Adm. Code 302.203 for this narrative criterion and Table C-5 of the 2008 Integrated Report for the location where this use of the methodology is supposedly located.<sup>9</sup> This statement is a complete misunderstanding or misrepresentation of the use of this habitat metric. The Agency clearly identifies in Table C-5 of the 2008 Integrated Report that the sedimentation/siltation assessment methodology is not used to assess attainment of the narrative criteria. There is no support for U.S. EPA to conclude that assessment of a specific percentage of silt/mud to determine whether sedimentation/siltation is a potential pollutant cause of aquatic life use impairment is used

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<sup>9</sup> 35 Ill. Adm. Code 302.203 is a narrative criterion applicable to General Use waters which is focused primarily on the protection of aesthetic uses.

to assess attainment of the narrative water quality standard. *See*, Attachment G at pages 1-2.

In addition, Illinois EPA has adequately documented the reasonableness of its change to the sedimentation/siltation assessment methodology. Illinois EPA believes that silt/mud is a physical habitat condition that should be considered within the same methodology used to assess the impact of other physical habitat conditions. *See*, Attachment G at pages 1-2. Illinois EPA was reasonable to conclude that using  $\geq 75\%$  silt/mud as a guideline is more scientifically valid than using  $\geq 34\%$  silt/mud. While U.S. EPA has criticized this determination, it neither has shown the scientific unreasonableness of how Illinois EPA uses the 75% silt/mud guideline nor has U.S. EPA presented and justified a more scientifically reasonable alternative.

As Illinois EPA has explained above, U.S. EPA does not have authority to disapprove this methodology change or to require a “good cause” showing under 40 C.F.R. §130.7(b)(6)(iv). Although Illinois EPA believes the only showing required for a change to its listing methodology is to show that the change is reasonable, the Agency has also shown good cause for no longer using this unreasonable, flawed methodology in its 2008 Integrated Report. Illinois EPA presents the reasons for changing this methodology and its response to U.S. EPA’s “Region 5 Evaluation of the Illinois’ Integrated Report Assessment Methodology:  $\geq 75\%$  Silt/Mud Substrate to Identify Sedimentation/Siltation as a Cause of Impairment” (found in Attachment F) in detail in Attachment G to these comments. In order to sustain its proposed decision, U.S. EPA has to conclude that the greater than 34 percent silt/mud guideline meets the definition of a water quality standard under the Clean Water Act and U.S. EPA must then take the necessary procedural steps to make this guideline an effective and enforceable water quality standard under both state and federal law.

Finally, in the case of the sedimentation/siltation partial disapproval, even if Illinois was required to make a good cause showing for this non-water quality standard change and even if good cause had not been shown, U.S. EPA’s Decision Document and proposed decision to make changes to Illinois’ 2008 303(d) List is arbitrary and capricious and an abuse of discretion for failing to articulate a rationale based in law or science for its decision to reject Illinois EPA’s use of the 75% silt/mud guideline in favor of a more arbitrary 34% silt/mud guideline. *See*, Motor Vehicle Mfrs. Ass’n v. State Farm Auto Ins. Co., 463 U.S. 29, 43 103 S.Ct. 2856, 77 L.Ed. 2d 443 (1983). Even U.S. EPA’s own analysis in Attachment F is not able to articulate a clear scientific basis for the  $\geq 34\%$  silt/mud guideline or any other single numeric guideline. *See*, Attachments F and G.

#### *Flaws in U.S. EPA’s Proposed List of Sedimentation/Siltation Waters (Table 5)*

Of the 23 waters where sedimentation/siltation was removed as a potential pollutant cause of impairment (Attachment 1, Table 5 in U.S. EPA’s decision document) only eight of these segments are being removed from Illinois’ 303(d) List. Four of these were removed because, based on new data, aquatic life use was assessed as fully supporting. This change in use support was not affected by the change in methodology for sedimentation/siltation. Three segments were moved to category 4C because it was determined that aquatic life use impairment was due to pollution, not pollutants. Two of

these three had new data which met the old criteria for silt/mud bottom substrate. One segment was moved to category 3 because it was determined that the assessment methodology used was not appropriate to assess aquatic life use in this water body type and that no appropriate methodology currently exists for this water body. This water body (IL\_AA-01) is now considered not assessed for aquatic life use. *See*, Attachment E. In addition, for 12 of the waters which remained on the 303(d) List, new data indicated that the previous sedimentation/siltation guidelines were attained, so that removal of sedimentation/siltation as a potential pollutant cause of impairment is justified irrespective of the change in methodology. *See*, Attachment E. Even if U.S. EPA does not reverse its disapproval decision and does not find Illinois EPA's methodology to be reasonable, U.S. EPA must reevaluate the errors in the specific segments identified in Attachment 1, Table 5 of its Decision Document in its final determination.

### **U.S. EPA's Partial Disapproval of Illinois' 303(d) List and Proposed 303(d) List for Illinois for Dissolved Oxygen as a Non-Pollutant Cause of Impairment**

As U.S. EPA explained in its Decision Document, Illinois EPA "has removed DO as a cause of impairment from waters on the final 2008 303(d) List because DO is not a pollutant under the CWA, and [Illinois EPA] only lists pollutant causes of impairment on the 303(d) list." Attachment B at 10. U.S. EPA agrees with Illinois EPA that dissolved oxygen is not a pollutant under the Clean Water Act. U.S. EPA's guidance documents make clear that Category 5 is reserved for a list of waters where a pollutant is causing the impairment. Where only a non-pollutant cause of impairment can be identified, waters are to be placed in Category 4C instead of Category 5. As U.S. EPA indicates in the Decision Document, in most of the segments where dissolved oxygen had previously been incorrectly included as a pollutant cause of impairment, the water quality limited segment remains on the 303(d) List with other pollutants listed as potential causes of the impairment. Despite these factors, U.S. EPA has disapproved this change to the 2008 Illinois 303(d) List and has proposed to add the phrase "cause unknown – DO" to Illinois EPA's 303(d) List for each of these segments.

Illinois EPA strongly disagrees with U.S. EPA that adding 'cause unknown – DO' provides clarity. Illinois EPA thinks instead that it creates more confusion. More importantly, the Illinois EPA believes U.S. EPA is exceeding its authority under the Clean Water Act by making this type of change to the Illinois 303(d) List. Under Section 303(d)(2) "Each State shall submit to the Administrator ... for his approval the waters identified and the loads established under paragraphs (1)(A), (1)(B), (1)(C), and (1)(D) of this subsection." U.S. EPA is responsible for approving the list of impaired waters and TMDLs established for specified pollutants. This authority does not include the authority to make changes to the State's identification of non-pollutant causes of impairment in its submission.

U.S. EPA states that by identifying these waters as 'cause unknown – DO' "This informs the public as to the type of impairment of the water and, more importantly, helps ensure that the low DO will be addressed." *See*, Attachment B at 10. Neither Section 303(d) of the Clean Water Act, nor any implementing regulations require Illinois EPA to provide such additional information about the type of problems in the 303(d) List of waters, other than identification of the pollutants causing or expected to cause violations

of water quality standards. Furthermore, this information is already provided to the public in Illinois' Integrated Report in other appendices. *See*, Illinois 2008 Integrated Report at Appendix B. Illinois has provided this additional information to U.S. EPA in both its hard copy and electronic submission of the Integrated Report and Assessment Database (ADB).

Adding 'cause unknown-DO' to all waters not meeting the dissolved oxygen standard is inappropriate and misleading. In many instances the pollutants contributing to low dissolved oxygen are identified and there is not an unknown cause of low dissolved oxygen as U.S. EPA's listing would indicate. For several waters impacted by U.S. EPA's proposed changes to Illinois' 303(d) List, TMDL studies have been conducted and determined that low dissolved oxygen is not caused by a pollutant. In addition, Illinois EPA has already indicated 'cause unknown' for waters in which the low dissolved oxygen impairment may be caused by a pollutant but where no pollutant causes could be identified. U.S. EPA should clarify whether it is proposing to remove the current listing of 'cause unknown' where it has been identified as such under Illinois EPA's methodology and replace it with 'cause unknown – DO,' or whether U.S. EPA is proposing to add 'cause unknown – DO' as an additional cause in those segments where 'cause unknown' is already identified.

Using 'cause unknown – DO' is not currently an option in the Assessment Database (ADB) designed and promoted by U.S. EPA. Because Illinois EPA uses the U.S. EPA Assessment Database (ADB) – as recommended by U.S. EPA - there is no way for Illinois EPA to track this cause in the database. This will create confusion and difficulty in future assessment cycles. The Assessment Database (ADB) was developed by U.S. EPA as a method for tracking assessments and complying with U.S. EPA's Integrated Report Guidance. The changes U.S. EPA is proposing to make to Illinois' 303(d) List are not consistent with the limitations U.S. EPA's own software places on the users who rely on it.

U.S. EPA states that adding 'cause unknown – DO' to Illinois' 303(d) List will help "ensure that the low DO will be addressed." Attachment B at 10. However, Illinois EPA always carefully examines the reasons for low dissolved oxygen to determine whether a TMDL is required for some pollutant which may be contributing to low dissolved oxygen. As stated in the 2008 Integrated Report, "Illinois EPA evaluates all water chemistry data in an effort to identify other pollutants, such as total phosphorus, which may be contributing to low dissolved oxygen." *See*, 2008 Illinois Integrated Report at 114. In preparation of the 303(d) List, Illinois EPA will also "list cause unknown (which means pollutant unknown) as a cause of impairment in those situations where a pollutant is suspected of contributing to low dissolved oxygen but where that pollutant could not be identified from existing data." *See*, 2008 Illinois Integrated Report at 10. The addition of 'cause unknown – DO' to every dissolved oxygen impaired segment does not in any way affect the requirements to develop TMDLs for such pollutants, or ensure that such TMDLs are developed. Nor does it affect how Illinois EPA evaluates data to determine if a pollutant is contributing to low dissolved oxygen conditions.

U.S. EPA states in its Decision Document that "without the information identifying the low DO problem on the list, [Illinois EPA] could complete TMDLs for the pollutants identified, but not address the DO problem." Attachment B at 10. This



tracking issue for U.S. EPA cannot be used to justify adding causes of impairment to Illinois' 303(d) List that neither the Clean Water Act nor any implementing regulation requires Illinois to list or to even submit for informational purposes. Furthermore, this action is not necessary for U.S. EPA to track the development of TMDLs because Illinois EPA identifies dissolved oxygen as a cause of impairment in other parts of both the Integrated Report and the Assessment Database. Both of these have been submitted to U.S. EPA; therefore, all information necessary to track dissolved oxygen impairments in Illinois waters has been provided to U.S. EPA. If U.S. EPA believes that an appropriate TMDL has not been developed for any water body, U.S. EPA has authority to disapprove removal of the water quality limited segment from the 303(d) List at that time or to disapprove the TMDL developed by the Illinois EPA and to develop the TMDLs that U.S. EPA believes would be appropriate for the pollutant or pollutants at issue.

U.S. EPA states in its Decision Document that "Illinois identified 254 delistings of impairments for DO."<sup>10</sup> Attachment B at 15. While this terminology may have been used in the 2008 Integrated Report, under the Clean Water Act removal from the 303(d) List would only occur when the Illinois EPA removes a water or water quality limited segment from the 303(d) List. Illinois EPA believes that the action described regarding removing dissolved oxygen as a potential pollutant cause of impairment (because it's not a pollutant) is not a regulatory "delisting" of a water or impairment. Rather, it is merely a correction to the information submitted to U.S. EPA identifying the potential pollutant causes of the existing impairment to the aquatic life use. When Illinois EPA completes TMDLs for those waters that are impaired by pollutants, U.S. EPA has an opportunity to address whether those TMDLs will actually result in attainment of the aquatic life use including improving the dissolved oxygen levels. U.S. EPA is overstepping its authority under the Clean Water Act to interfere with the state's identification of the potential causes of 303(d)-listed impairments. Therefore, U.S. EPA lacks authority to act on its proposed changes to the Illinois 303(d) List.

*Flaws in U.S. EPA's Proposed List of 'Cause Unknown – DO' Waters (Attachment 2)*

Contrary to U.S. EPA's Decision Document and Attachment 2 to that Document, there are 294 segments where Illinois EPA removed dissolved oxygen as a pollutant cause of impairment. Of these 294 segments, only 17 segments have actually been removed from Illinois' 303(d) List. Of these, one was moved to category 3, four were moved to category 4C, five were moved to category 2 and seven were moved to category 4A. For the segment that was moved to category 3 it was determined that the assessment methodology used was not appropriate to assess attainment of aquatic life use in this water body type and that no appropriate assessment methodology currently exists for this water. This water is now considered not assessed for aquatic life use. For the four waters moved to category 4C, it was determined that there was no pollutant contributing to low

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<sup>10</sup> It is not clear how U.S. EPA determined that there were 254 impacted water quality limited segments. Illinois EPA found a total of 276 segments listed in Attachment 2 to the U.S. EPA Decision Document. All of the waters in that list remain in Category 5 of the Illinois 2008 303(d) list except for one segment that was moved to Category 4C. Illinois EPA believes that the correct number of segments impacted by this change should be 294. U.S. EPA must address these discrepancies in U.S. EPA's final decision document.

dissolved oxygen. For the five waters moved to category 2, new data indicated that aquatic life use was attained. For the seven waters moved to category 4A, all pollutant causes of impairment were addressed in TMDLs that are already approved by U.S. EPA. For cases in which a TMDL has already been conducted and submitted to U.S. EPA, the pollutants contributing to low dissolved oxygen were addressed or it was determined that the low dissolved oxygen was not caused by a pollutant.

For all of the reasons explained above, U.S. EPA must reverse its disapproval of the 2008 Illinois 303(d) List based on removal of dissolved oxygen as a pollutant cause of impairment and must reverse its proposed decision to change Illinois' 303(d) List to include 'cause unknown – DO' for the specified waters.

### **Partial Disapproval of Illinois' 303(d) List and Proposed 303(d) List for Illinois for Use of Revised Water Quality Standards Not Formally Approved by U.S. EPA**

#### **A. Dissolved Oxygen.**

U.S. EPA found in its Decision Document that Illinois EPA:

used the new DO standard in this cycle in determining attainment and causes of aquatic life use impairment. At this time all the impairments delisted due to this standard change are being disapproved by U.S. EPA. U.S. EPA will publish a notice in the Federal Register identifying those impairments to be placed back into Category 5 based on the current standard and provide opportunity for comment.

Attachment B at page 10.

A revised water quality standard for dissolved oxygen was adopted by the Illinois Pollution Control Board and effective under state law on January 28, 2008. Illinois EPA submitted the water quality standard documentation to U.S. EPA on May 9, 2008 except for certification by the Illinois Attorney General's office which was sent to U.S. EPA Region 5 under a separate cover on October 21, 2008. On December 18, 2008, the revised dissolved oxygen water quality standard was approved by U.S. EPA. *See*, Attachment C. Based on final federal approval of the dissolved oxygen water quality standard revision, Illinois EPA is confident that the basis for U.S. EPA's proposed decision has been addressed and therefore the partial disapproval based on this issue should be reversed and no changes to the Illinois 303(d) List based on this issue should be finalized.

#### **Flaws in U.S. EPA's Proposed List of Dissolved Oxygen Waters (Table 1)**

Although Illinois EPA is confident that this final approval of the state's revised water quality standard should eliminate the need for any changes to the 2008 303(d) List on this basis, the Agency would also like to point out factual errors in the Attachments to U.S. EPA's Decision Document which are being proposed as changes to the Illinois 303(d) List. If, for some reason, approval of the final water quality standard is

insufficient to result in U.S. EPA revisiting its proposed decision, the decision should be revisited based on these factual errors. In Table 1 of Attachment 1 to U.S. EPA's Decision Document (Attachment B to these comments), U.S. EPA identifies 15 segments where it believes Dissolved Oxygen was deleted as a cause of impairment based on a new water quality standard change that had not been approved by U.S. EPA. None of these 15 segments identified by U.S. EPA were changed as a result of the revised water quality standard.<sup>11</sup> In most cases, the waters identified were found to have improved since they were previously identified as water quality limited segments, in three cases both the old and new dissolved oxygen standards were found to be met, for one segment U.S. EPA incorrectly identified the segment as having changed its attainment of the dissolved oxygen standard and for two of the segments, dissolved oxygen was not identified as an impairment on the 2006 303(d) List and no new data indicates a failure to meet either the old or the new dissolved oxygen standard. *See*, Attachment E.

## **B. Total Dissolved Solids and Sulfate**

Water quality standards for total dissolved solids and sulfate were revised by the Illinois Pollution Control Board on September 4, 2008 with an effective date of September 8, 2008. This water quality standard change was submitted to the Illinois Attorney General's Office for certification on November 12, 2008 and to U.S. EPA for approval on November 25, 2008. On January 15, 2009, certification by the Illinois Attorney General's Office was submitted to U.S. EPA Region 5. *See*, Attachment D. Illinois EPA is hopeful that receipt of final certification from the Illinois Attorney General's Office will allow U.S. EPA sufficient opportunity to approve these standards and make the appropriate changes to its proposed decision to make changes to the Illinois 303(d) List before a final determination is made.

On pages 9-10 of the Decision Document, U.S. EPA determined that "At this time all the impairments delisted due to this standard change are being disapproved. U.S. EPA will publish a notice in the Federal Register identifying the waters/impairments to be placed back into category 5 and provide an opportunity for comment." Attachment B at 9-10. The Illinois EPA recognizes U.S. EPA's authority to place any waters not included in Category 5/Appendix A-1 back onto the State's 303(d) List as a result of the lack of federal approval for these two water quality standard changes. However, Illinois EPA believes that U.S. EPA's authority to make changes to the Agency's list only extends to adding water quality limited segments to the 303(d) List where the water quality limited segment itself was not included in Appendix A-1/Category 5. The removal of total dissolved solids and sulfates as potential causes of impairment resulted in removing only two segments (IL\_ATFF-02 and IL\_DJE-02) from Illinois' list of impaired waters, and one of those segments (IL\_DJE-02) would have been removed irrespective of the water quality standards change because it is presently fully supporting the aquatic life use. In addition, 14 total dissolved solids and 6 sulfate causes of impairment would have been removed without the water quality standard change based on new information which

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<sup>11</sup>It appears the errors have resulted from reliance on Appendix A-4 to the Illinois Integrated Report without referring back to additional information in the electronic submittal of the Assessment Database (ADB). For Segments IL\_GL-09, IL\_G-39 and IL\_GL-10, no mention is made of the dissolved oxygen water quality standard being attained in Appendix A-4, so inclusion of these may have been a transcription error.

showed that the previous applicable total dissolved solids or sulfate standard is being attained. *See*, Attachment E. As indicated in Attachment E, the use of the phrase “due to change in WQS” in Appendix A-4 with regard to these 20 segments rather than “reason for recovery unspecified” and “flaws in original listing” probably created the confusion for U.S. EPA with regard to these 14 segments. Illinois EPA expects U.S. EPA will be able to correct this confusion and amend its proposed decision in its final determination.

In the event U.S. EPA has not formally approved Illinois EPA’s water quality standard revisions for total dissolved solids and sulfate prior to final action on the proposed changes to Illinois’ 2008 303(d) List, Illinois EPA requests that U.S. EPA defer any action on water quality limited segment listings impacted by this standards change until after U.S. EPA review of the total dissolved solids and sulfate submittal has been completed.

**Procedural Comments on U.S. EPA’s Partial Disapproval of Illinois’ 303(d) List and Proposed 303(d) List for Illinois: Timeline for TMDL development Following 303(d) List Disapproval**

Section 303(d)(2) of the Clean Water Act provides as follows:

Each State shall submit to the Administrator from time to time...for his approval the waters identified and the loads established under paragraphs (1)(A), (1)(B), (1)(C), and (1)(D) of this subsection. The Administrator shall either approve or disapprove such identification and load not later than thirty days after the date of submission...If the Administrator disapproves such identification and load, he shall not later than thirty days after the date of such disapproval identify such waters in such State and establish such loads for such waters as he determines necessary to implement the water quality standards applicable to such waters and upon such identification and establishment the State shall incorporate them into its current plan under subsection (e) of this section.

The comparable provision in U.S. EPA’s implementing regulations is found in 40 C.F.R. §130.7 (d)(2) and provides as follows in relevant part:

The Regional Administrator shall either approve or disapprove such listing and loadings not later than 30 days after the date of submission. . . .If the Regional Administrator disapproves such listing and loadings, he shall, not later than 30 days after the date of such disapproval, identify such waters in such State and establish such loads for such waters as determined necessary to implement applicable WQS. The Regional Administrator shall promptly issue a public notice seeking comment on such listing and loadings. After considering public comment and making any revisions he deems appropriate, the Regional

Administrator shall transmit the listing and loads to the State, which shall incorporate them into its current WQM plan.

U.S. EPA has not complied with the Clean Water Act and its own implementing regulations by issuing a notice of changes to the Illinois 303(d) List without also developing TMDLs for the impacted segments that U.S. EPA believes to be water quality limited. Illinois EPA has determined not to place information on the 2008 Illinois 303(d) List because no TMDL should be developed for non-pollutants or for parameters which Illinois EPA does not believe are causing water quality standard violations and for which Illinois has no correlating numeric or narrative water quality criteria. If U.S. EPA intends to require this same information to remain on the Illinois 303(d) List, U.S. EPA is also obligated to develop TMDLs for these waters and parameters within 30 days. It is not clear what U.S. EPA relies on as a legal basis for its proposed decision to conclude that disapproved waterbody/pollutant combinations will retain their priority ranking from the 2006 Illinois 303(d) List. If U.S. EPA wants to include this information on Illinois' 303(d) List they must proceed to establish TMDLs for these waters upon disapproval as required by the Clean Water Act. *See, Hayes v. Browner*, 117 F.Supp. 1182, 1194-1195 (D.C. N.D. OK 2000)(aff'd in *Hayes v. Whitman*, 264 F.3d 1017 (10<sup>th</sup> Cir. 2001); *Friends of the Wild Swan v. U.S. EPA*, 130 F.Supp.2d 1184, 1191 (D. MT 1999); *NRDC v. Fox*, 93 F.Supp.2d 531, 558-59 (S.D.NY 2000).

### **Conclusion**

Illinois EPA appreciates this opportunity to provide comments on both U.S. EPA's review of its 303(d) List submission and the changes U.S. EPA is proposing to make to the 2008 Illinois 303(d) List. Illinois EPA is pleased that U.S. EPA has granted approval to the majority of the 2008 Illinois 303(d) List. Illinois EPA also agrees with U.S. EPA's proposed decision to correct the error in Illinois EPA's submission regarding attainment of the applicable boron standard in Segment E-26 of the Sangamon River. We are confident that concerns raised by U.S. EPA regarding Illinois EPA's reliance on water quality standards for dissolved oxygen, total dissolved solids, and sulfates that were effective under state law but not approved by U.S. EPA at the time of its October 22, 2008 Decision Document will be resolved during the comment period.

However, Illinois EPA still has significant concerns about the legal, technical, and even factual bases for the remaining proposed changes to the Illinois 2008 303(d) List. The Agency is hopeful that presenting all of these concerns in a comprehensive fashion will allow U.S. EPA to effectively consider and evaluate these comments prior to taking any final action that would result in changes to the 303(d) List submitted by Illinois EPA.

As the U.S. Supreme Court has stated, "The Clean Water Act anticipates a partnership between the State and the Federal Government, animated by a shared objective: 'to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.' 33 U.S.C. §1251(a)." *Arkansas v. Oklahoma*, 503 U.S. 91, 101, 112 S.Ct. 1046, 1054 (1992). Illinois EPA recognizes the vital role U.S. EPA plays in this partnership through approval of State submissions of new and revised water quality standards, 303(d) Lists, and TMDLs; but U.S. EPA must also acknowledge the responsibilities that Congress left to the States for the waters in their jurisdiction under

the Clean Water Act. Congress has spoken clearly in Sections 303(d)(1)(A) and (d)(2) of the Clean Water Act that U.S. EPA's role in relation to state submissions of 303(d) Lists is to approve or disapprove the identification of waters where water quality standards will not be met after the application of effluent limitations. U.S. EPA has not been granted authority to approve or disapprove the identification of potential pollutant causes of water quality standard violations. Where Congress has spoken clearly and unambiguously, U.S. EPA must give effect to the statutory language and is not entitled to deference in its own interpretation of the statute. Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837, 842-843, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984).

In order to support its proposed decision, U.S. EPA must conclude that total nitrogen and sedimentation/siltation (percent silt/mud) are de facto water quality standards under Illinois law. If U.S. EPA is making such a finding that these are actually water quality standards even though they have not been promulgated as rules under Illinois law or submitted for federal approval and federally approved, it should state so clearly in its final decision document and undertake the required process under Section 303(c) of the Clean Water Act following disapproval of State water quality standards to promulgate a water quality standard for total nitrogen and silt/mud that is applicable to the waters in Illinois.

If U.S. EPA finalizes the proposed decision regarding the 2008 Illinois 303(d) List, it will have exceeded its authority under the Clean Water Act and would be acting in a manner that is arbitrary, capricious, an abuse of discretion and contrary to law. Motor Vehicle Mffs. Ass'n. v. State Farm Auto Ins. Co., 463 U.S. 29, 43, 103 S.Ct. 2856, 77 L.Ed.2d 443 (1983).

Finally, Illinois EPA is hopeful that U.S. EPA will withdraw its partial disapproval of Illinois' 2008 303(d) List and proposed changes to that list. In particular, U.S. EPA should withdraw the addition of information to Illinois' 303(d) List regarding the revised dissolved oxygen, total dissolved solids and sulfate water quality standards that have now met the requirements for water quality standard approval by U.S. EPA and U.S. EPA should withdraw its addition of 'cause unknown – DO' and the addition of pollutant causes of total nitrogen and sedimentation/siltation to Illinois' 2008 303(d) List.

## **LIST OF ATTACHMENTS**

- Attachment A: Cover letter from Timothy C. Henry, Acting Director, Water Division, U.S. Region 5 to Marcia T. Wilhite, Chief, Bureau of Water, Illinois EPA (October 22, 2008).
- Attachment B: U.S. EPA Region 5, Decision Document for the Partial Approval/Partial Disapproval of Illinois' Submission of the State's Integrated Report with Respect to Section 303(d) of the Clean Water Act (Category 5 Waters) and (Attachments 1 through 3) (October 22, 2008).
- Attachment C: Dissolved Oxygen Water Quality Standard Approval by U.S. EPA Region 5 (December 18, 2008).

- Attachment D: Illinois Attorney General's Certification of TDS and Sulfate water quality standard rulemaking (January 15, 2009)
- Attachment E: Response to Individual Assessment Units Listed in Tables 1 Through 5 of USEPA's Decision Document for the Partial Approval/Partial Disapproval of Illinois' Submission of the State's Integrated Report with Respect to Section 303(d) of the Clean Water Act (Category 5 Waters)
- Attachment F: Region 5 Evaluation of the Illinois' Integrated Report Assessment Methodology:  $\geq 75\%$  Silt/Mud Substrate to Identify Sedimentation/Siltation as a Cause of Impairment (Document not dated, but transmitted via email to Illinois EPA on December 17, 2008)
- Attachment G: Illinois EPA's Technical Review of U.S. EPA's Evaluation of Sedimentation/Siltation (Silt/Mud) Methodology