UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JUN 27 2006

REPLY TO THE ATTENTION OF:
WW-16J

Marcia T. Willhite
Chief, Bureau of Water
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

Re: Approval of 2006 Section 303(d) List

Dear Ms. Willhite:

The United States Environmental Protection Agency (U.S. EPA) has conducted a complete review of Illinois' 2006 Section 303(d) list and supporting documentation and information. Based upon this review, U.S. EPA has determined that Illinois' 2006 list of water quality limited segments still requiring Total Maximum Daily Load calculations meets the requirements of Section 303(d) of the Clean Water Act and U.S. EPA's implementing regulations. Therefore, U.S. EPA hereby approves Illinois' Section 303(d) list. The statutory and regulatory requirements, and U.S. EPA's review of Illinois' compliance with each requirement, are described in the enclosed decision document.

U.S. EPA's approval of Illinois' Section 303(d) list extends to all water bodies on the list with the exception of those waters that are within Indian Country, as defined in 18 U.S.C. Section 1151. U.S. EPA is taking no action to approve or disapprove the State's list with respect to those waters at this time. U.S. EPA, or eligible Indian Tribes, as appropriate, will retain responsibilities under Section 303(d) for those waters.

We appreciate your hard work in this area and your timely submittal of the list as required. If you have any questions please contact Mr. Kevin Pierard, Chief, Watersheds and Wetlands Branch, at 312-886-4448.

Sincerely yours,

Jo Lynn Traub, Director
Water Division

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Watershed Management Section
BUREAU OF WATER

Enclosure

cc: Bruce Yurdin, IEPA
Gregg Good, IEPA
Jennifer Clarke, IEPA

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DECISION DOCUMENT FOR THE APPROVAL OF ILLINOIS' SUBMISSION OF THE STATE'S INTEGRATED REPORT WITH RESPECT TO SECTION 303(d) OF THE CLEAN WATER ACT (CATEGORY 5 WATERS)

U.S. EPA has conducted a complete review of Illinois' 2006 Section 303(d) list and supporting documentation and information. Based upon this review, U.S. EPA has determined that Illinois' list of impaired waters still requiring total maximum daily loads (TMDLs) meets the requirements of Section 303(d) of the Clean Water Act (CWA or Act), and U.S. EPA's implementing regulations. Therefore, U.S. EPA hereby approves Illinois' 2006 Section 303(d) list. Illinois' list of impaired waterbodies still requiring TMDLs appears in Category 5 of the Illinois 2006 Integrated Water Quality Monitoring and Assessment Report (IR); and U.S. EPA's approval extends only to the waterbodies in Category 5 of the IR. The statutory and regulatory requirements, and U.S. EPA's review of Illinois compliance with each requirement, are described in detail below.

I. Statutory and Regulatory Background

A. Identification of Water Quality-Limited Segments (WQLSs) for inclusion on Section 303(d) List

Section 303(d)(1) of the Act directs each state to identify those waters within its jurisdiction for which effluent limitations required by Section 301(b)(1)(A) and (B) are not stringent enough to implement any applicable water quality standard, and to establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters. The Section 303(d) listing requirement applies to waters impaired by point and/or nonpoint sources, pursuant to U.S. EPA's long-standing interpretation of Section 303(d).

States do not need to list WQLSs for which the following controls are adequate to implement applicable water quality standards: (1) technology-based effluent limitations required by the Act; (2) more stringent effluent limitations required by state or local authority; and (3) other pollution control requirements required by state, local, or federal authority.[1] All other WLQSs must be listed.[2]

B. Consideration of Existing and Readily Available Water Quality-Related Data and Information

In developing Section 303(d) lists, states are required to assemble and evaluate all existing and readily available water quality-related data and information -- including, at a minimum, consideration of existing and readily available data and information about the following categories of waters: (1) waters identified in the state's most recent Section

[1] 40 C.F.R. § 130.7(b)(1).

[2] 40 C.F.R. §§ 130.7(b)(1) and (b)(2).

305(b) report as partially meeting or not meeting designated uses, or as threatened; (2) waters for which dilution calculations or predictive modeling indicate nonattainment of applicable standards; (3) waters for which water quality problems have been reported by governmental agencies, members of the public, or academic institutions; and (4) waters identified as impaired or threatened in any Section 319 nonpoint assessment submitted to U.S. EPA.[3] In addition to these minimum categories, states are required to consider any other data and information that is existing and readily available. U.S. EPA has described the categories of water quality-related data and information that may be existing and readily available.[4] While states are required to evaluate all existing and readily available water quality-related data and information, states decide whether to rely on particular data or information in determining whether to list particular waters.

States must provide documentation to U.S. EPA to support its determination to list or not to list waters. This documentation must include, at a minimum, the following information: (1) a description of the methodology used to develop the list; (2) a description of the data and information used to identify waters; (3) a rationale for any decision not to use any existing and readily available data and information for any category of waters; and (4) any other reasonable information required by U.S. EPA.[5]

C. Priority Ranking

Section 303(d)(1)(A) of the Act requires each state to establish a priority ranking for listed waters. Each state must include a priority ranking for all listed WQLSs, and must identify those WQLSs targeted for TMDL development in the next two years.[6] In prioritizing and targeting waters, states must take into account the severity of the pollution and the uses to be made of such waters.[7] States may consider other factors relevant to prioritizing waters for TMDL development, including immediate programmatic needs, vulnerability of particular waters as aquatic habitats, recreational, economic and aesthetic importance of particular waters, degree of public interest and support, and state or national policies and priorities.[8]

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[3] 40 C.F.R. § 130.7(b)(5).

[4] See *Guidance for Water Quality-Based Decisions: The TMDL Process*, U.S. EPA (April, 1991) ("U.S. EPA's 1991 Guidance"), at Appendix C.

[5] 40 C.F.R. § 130.7(b)(6).

[6] 40 C.F.R. §130.7(b)(4).

[7] CWA Section 303(d)(1)(A).

[8] See 57 Fed. Reg. 33040, 33045 (July 24, 1992); see also U.S. EPA's 1991 Guidance.

II. Analysis of Illinois' Submittal

A. Listing Methodology and Reporting

U.S. EPA has issued guidance for integrating the development and submission of 2006 Section 305(b) water quality reports and Section 303(d) lists of impaired waters.[9] This Integrated Report Guidance recommends that states develop an integrated report on the quality of their waters by placing all waters into one of five assessment categories, with Category 5 consisting of water quality-limited segments for which available information indicates that at least one designated use is not being supported or is threatened, and for which a TMDL is needed.

On April 20, 2006, U.S. EPA received the *Illinois Integrated Water Quality Report and Section 303(d) List -2006* (IR). Consistent with U.S. EPA's Integrated Report Guidance, this IR combines the listing requirements of Sections 303(d), 305(b) and 314 of the Clean Water Act. Appendix A of the IR is the Section 303(d) list, consisting of Category 5 waters, which are the subject of this decision document. (The terms "water" or "water body" in the IR and this decision document refer to water segments as identified in this list.)

Section C-2 of the IR explains the assessment methodology used to categorize waters in terms of attainment of designated uses and causes of impairment. The designated uses include aquatic life, indigenous aquatic life, fish consumption, primary contact, secondary contact, public and food processing water supply, and aesthetic quality. IEPA determined the resource quality of each segment by identifying the level of attainment of each applicable designated use as either "fully supporting" or "not supporting" each applicable designated use in that segment. Uses that are not supported are impaired, and any water with at least one unsupported use is considered impaired. For each impaired use in each water body, IEPA attempted to identify potential causes and sources of the impairment. If the cause or source could not be determined, it was listed as unknown.

IEPA employs the following methodology for each designated use and water body type:

Aquatic Life –Streams

Assessments of aquatic life use are based on water body-specific monitoring data. Illinois has three primary stream monitoring programs. Data from these programs are used in assessing aquatic life use. The programs are as follows:

1) The Intensive Basin Survey program provides, for each site: a fish community sample used to quantify relevant biological indicators of human impact, including a fish Index of Biotic Integrity score; a macroinvertebrate community sample used to quantify relevant biological indicators of human impact, including a Macroinvertebrate Biotic Index score; water chemistry data from two or three

[9] *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Section 303(d), 305(b), and 314 of the Clean Water Act*, U.S. EPA Office of Water (July 29, 2005) ("Integrated Report Guidance").

water samples; and physical-habitat data from field measurements and observations.

2) The Ambient Water Quality Monitoring Network (AWQMN) program provides for each site, water chemistry data from water samples collected once every six weeks (approximately nine per year). Some AWQMN stations are also sampled during Intensive Basin Surveys.

3) The Facility-Related Stream Survey program provides, per site (each survey comprises multiple sites): a macroinvertebrate sample used to calculate a Macroinvertebrate Biotic Index score; water chemistry data from at least one water sample; physical-habitat data from field observations; and sometimes a fish community sample (as in the Intensive Basin Surveys). Typically, the assessment of aquatic life use in this program is based on the information from the site(s) having the most severe aquatic life impairment.

While assessments of aquatic life use are based on data from individual monitoring stations, they are extrapolated to represent larger stream segments, also called assessment units. Tables C-1, C-2 and C-3 of the IR identify the guidelines used for listing of aquatic life use impairments.

Table C-4 of the IR lists the potential causes of impairment for the aquatic life use in streams. When a water body is determined to be Not Supporting aquatic life use, one exceedance of an applicable Illinois water quality standard (related to the protection of aquatic life) results in identifying the parameter as a potential cause of impairment. Additional guidelines used to determine potential causes of impairment include site-specific standards (35 Ill. Adm. Code 303, Subpart C), adjusted standards (published in the Illinois Pollution Control Board's *Environmental Register*), and the narrative standards at 35 Ill. Adm. Code 302.203. For parameters without numeric water quality standards, IEPA may use a statistically-derived numeric value or a field observation to identify potential causes of aquatic life use impairment for streams.

Aquatic Life Use – Inland Lakes

Assessments of aquatic life use are based primarily on physical and chemical water quality data collected via the Ambient Lake Monitoring Program, the Illinois Clean Lakes Program, or by non-Illinois EPA persons under an approved quality assurance project plan. The physical and chemical data used for aquatic life use assessments include: Secchi-disc transparency, chlorophyll *a*, total phosphorus, nonvolatile suspended solids, and percent surface area macrophyte coverage. These data are collected five times per year, generally from three distinct lake sites. A mean Trophic State Index (TSI) value is calculated for the most recent year of sampling by averaging the TSI- Secchi-disk transparency, TSI-total phosphorus (surface samples only), and TSI-chlorophyll *a*.

IEPA relies primarily on the Aquatic Life Use Index (ALI), set out in Table C-5 of the IR, to assess aquatic life use in inland lakes. The mean TSI, the percent surface area of macrophyte coverage during the peak growing season (June through August), and the

median concentration of nonvolatile suspended solids are used to calculate an ALI score. The 0.05 mg/L Illinois General Use Water Quality Standard for total phosphorus in lakes (35 Ill. Adm. Code 302.205) has been incorporated into the weighting criteria used to assign point values for the ALI. As shown in Table C-6 of the IR, an inland lake is designated as not supporting the aquatic use if the associated ALI score is greater than or equal to 75. Guidelines used to determine the potential causes of impairment of aquatic use are listed in Table C-7.

Aquatic Life Use – Lake Michigan

Aquatic life use assessments are based on the applicable Lake Michigan Basin Water Quality Standards (listed in Table B-4 of the IR), using the most recent three years of water quality data. Table C-8 of the IR sets out the guidelines for assessing aquatic life use in Lake Michigan-basin waters. The primary methods for identifying and listing potential causes of specific use impairments for aquatic life use in Lake Michigan are set out in Table C-9 of the IR.

Indigenous Aquatic Life

The indigenous aquatic life use represents aquatic-life conditions that are reasonably attainable for certain highly-modified waters, including some of the extensively modified streams and canals in the Chicago metropolitan area and Lake Calumet. Unlike most assessments of aquatic life use, assessment of indigenous aquatic life use is based primarily on surrogate water chemistry data rather than direct measures of aquatic life. All available water chemistry data are compared to the appropriate Secondary Contact and Indigenous Aquatic Life standards (Table B-2 of the IR). Assessments of indigenous aquatic life use rely on "frequency of exceedance" guidelines to better represent the true risk of impairment to aquatic life than would a single exceedance of a water quality criterion. Table C-10, of the IR, provides the guidelines used to assess indigenous aquatic life use in applicable streams and in Lake Calumet. Table C-11, of the IR, provides the guidelines for identifying potential causes of indigenous aquatic life impairment.

Fish Consumption – Streams, Inland Lakes and Lake Michigan

Illinois EPA assesses fish-consumption use based on water body-specific fish-tissue data and the resulting fish-consumption advisories issued by the Illinois Department of Natural Resources (IDNR). In general, if there is a restricted consumption advisory or no-consumption advisory and IEPA has site-specific data, then IEPA lists the water as impaired. See Tables C-12 and C-13 of the IR. The advisory's contaminant of concern is then listed as a cause of impairment for the Section 303(d) list, as shown in Table C-14 of the IR.

The statewide general fish-consumption advisory for mercury is an exception to this approach. The IDNR has issued a statewide general fish-consumption advisory of "no more than one meal per week of predator fish" for pregnant or nursing women, women of childbearing age, and children less than 15 years of age attributable to mercury. This

statewide advisory is based on methyl mercury being found routinely at levels of concern in predator fish tissues collected from throughout the state. In addition, a "Special Mercury Advisory" is given for certain specific waters, where even more restrictive consumption guidelines are recommended than the statewide advisory. Illinois EPA did not assess fish-consumption use as impaired in all waters of the state based on the statewide fish-consumption advisory for mercury. Instead, IEPA assessed fish-consumption use only for the specific waterbodies for which fish-tissue data indicated mercury levels that justified a one-meal-per-week consumption advisory. This is a larger category than the specific waters listed for a "Special Mercury Advisory" by IDNR, but includes those specific waters.

Primary Contact Use – Streams and Inland Lakes

To assess primary contact use, IEPA uses all fecal coliform bacteria measurements from water samples collected in May through October, over the most recent five-year period (i.e., 2000 through 2004 for this report). The concentration thresholds used to determine impairment are provided in Table C-15 of the IR.

Some portions of stream segments are exempt from the fecal coliform bacteria water quality standard, under 35 Ill. Adm. Code 302.209; and primary contact use does not apply in these portions.

Primary Contact – Lake Michigan

Fecal coliform bacteria data are collected as part of the Lake Michigan Monitoring Program, but insufficient numbers of these samples are collected during a 30-day period to appropriately apply the Lake Michigan fecal coliform water quality standard (see Table B-4 of the IR). In addition, these samples are collected in the open lake from one to six miles off shore and may not reflect conditions at beaches. At approximately 51 Lake Michigan beaches, local agencies collect daily *Escherichia coli* bacteria samples during the swimming season. Beaches are closed by these agencies if samples exceed 235/100 ml *Escherichia coli* bacteria (77 Ill. Adm. Code 820). Primary contact use is assessed by using the criteria set out in Tables C-17 (beaches) and C-18 (open waters). Table C-19 of the IR provides IEPA's guidelines for determining the cause for impairment when this use is not supported.

Secondary Contact – Streams, Inland Lakes and Lake Michigan

Secondary contact use is associated with all waters of the state. IEPA does not have assessment guidelines for secondary contact use, because existing water quality standards have no water quality criteria that specifically address this use. In any water body where primary contact use is assessed as Fully Supporting, secondary contact use is also assessed as Fully Supporting. In all other circumstances secondary contact use is not assessed.

Public and Food Processing Water Supply – Streams, Inland Lakes and Lake Michigan

The public and food processing water supply use is assessed in waterbodies where there is an active intake for this use. Table C-20 of the IR provides the guidelines for assessing this use, based on conditions in both untreated and treated water and using data acquired through the Clean and Safe Drinking Water Programs. Table C-21 of the IR provides the guidelines for identifying potential causes of impairment for this use.

Aesthetic Quality – Inland Lakes

In the 2006 report, Illinois identified, for the first time in a listing cycle, an aesthetic quality use for nearly all waters of the state. The assessment methodology for aesthetic quality uses the same methodology as had been used in the past to assess for secondary contact impairment. That is, IEPA uses physical and chemical data which includes: Secchi-disc transparency, chlorophyll *a*, total phosphorous. This data is used to determine the Trophic State Index (TSI). The Recreation Use Index (RUI) represents the extent to which pleasure boating, canoeing and aesthetic enjoyment are attained. The RUI is determined by using macrophyte coverage, nonvolatile suspended solids and the TSI scores. The RUI score is used to evaluate a lake and to determine whether a lake is impaired for aesthetic quality. The TSI and RUI, are described in Tables C-22 and C-23 of the IR. Table C-24 of the IR lists the guidelines for identifying potential causes of aesthetic quality use impairment.

B. Changes in Assessment and Listing Methodologies

U.S. EPA reviewed a number of changes to the State's assessment and listing methodologies, as discussed below.

Primary Contact

In the past, IEPA relied upon a subset of the available data for fecal coliform, representing only those samples collected when total suspended solids (TSS) were less than the 50th percentile for samples at that station. The state would then determine for fecal coliform whether the 400/100 ml guideline was met based on this data subset. For the 2006 IR, this methodology has been improved to determine use attainment under the water quality standard for fecal coliform using all the available fecal coliform sample data.

Also in past reports, most assessments of primary contact use in lakes were based primarily on Secchi-disk transparency. For the 2006 IR, these assessments were changed to "Not Assessed"; and current assessments of primary contact use are now based on data for fecal coliform. These assessments now provide a better indication of primary contact use attainment under the "General Use" standards.

Aesthetic quality use listing for inland lakes

As mentioned above, aesthetic use is a new listing use in 2006. It uses the same methodology previously used to assess secondary contact (recreation) use in lakes. In effect, this change means that all previous assessments of secondary contact use in lakes have been changed to assessments of aesthetic quality use. The change had no effect on 303(d) listing of waters.

Elimination of general code categories

In 2004, IEPA was in the process of eliminating general pollutant category codes in favor of specific pollutant categories, in order to provide more accurate information on impairment causes. This adjustment helped the State in making an effective transition to an Integrated Report approach for 2006. Not all the general cause codes had been eliminated before IEPA generated a final 303(d) list for 2004 list. Thus, the state completed this process after the 2004 list; and in the 2006 303(d) list has eliminated the remainder of the general cause codes.

Table C-30 of the IR identifies causes of impairment for segment/pollutant combinations from the 2004 list that are not included in the 2006 list, and explains the basis for not including these causes. Where the general pollutant category code was eliminated as a cause, the basis is identified as reason number 2, "flaws in original listing;" and a specific pollutant category is added to replace the general category.

Change in causes for drinking water assessments

The water quality standard for atrazine has been changed to increase the acceptable levels of atrazine. As a result, some segment/pollutant combinations have been removed from the list as now meeting standards. Table C-30 of the IR identifies segments/pollutants combinations which have been removed from the 2004 list and the reason why. The explanation for water segments now meeting standards for atrazine is stated as reason number 1 "State determines the water quality standard is being met."

Removal of nonpollutants

IEPA has delisted segment/pollutant combinations where the listed impairment did not address a specific pollutant. IEPA defines "pollutant" as a substance or material introduced into a waterbody by human activity, which excludes excess algal growth and aquatic plants as well as impairments identified based on habitat assessments or flow alterations. Table C-30 of the IR identifies segment/pollutant combinations waters that have been delisted on this basis, with the explanation "nonpollutant." Although impairments from these causes are no longer included on the 303(d) list, they continue to be identified in Appendices B-1 and B-2 of the IR, which provide specific assessment information for streams and inland lakes and indicate causes of impaired use.

Where a water is not attaining a use, such as aquatic life use, the water must still be included on the 303d list unless a state demonstrates that the impairment is due to

pollution, not a pollutant. For waters where algae or aquatic plants were originally listed as a pollutant and the water is not attaining a use, the cause for the 303(d) list has been changed to a known pollutant or is now listed as unknown. No waterbody was fully removed due to delisting of algae and aquatic plants. All waters which were originally listed with the algae or aquatic plant impairment remain on the list with an associated impairment listing (such as phosphorus). Segments listed on the 2004 303(d) list for "Habitat Assess (Streams)" are now listed in Appendix B-1 under Cause ID 84, "Alteration in stream-side or littoral vegetative covers."[10]

In previous lists, Illinois included many causes of impairment which are not pollutants (i.e. algal growth, habitat alterations) on the 303(d) list. Illinois adopted U.S. EPA's new assessment database (ADB) to help track impairment of waters. As maintained by IEPA, the ADB does not allow these nonpollutant impairments to be identified in category 5.[11] However, the nonpollutant impairments are still recognized by IEPA as potential causes of impairment, and are included in Appendix B of the IR.

The delisting of nonpollutant causes of impairment will generally have very limited impact on the number of water bodies included on Illinois' 2006 303(d) List and will in no way affect the state's obligation or intention to develop TMDLs that address excess algal and plant growth.

The delisting of habitat assessment (lakes), habitat assessment (streams), other flow alterations, and non-native species may result in the complete delisting of a few water bodies. Habitat assessment (lakes) usually indicates excessive aquatic plant growth. No lakes were removed from the 303(d) List because of the delisting of this cause. Habitat assessment (streams) usually indicates alterations in streamside or littoral vegetative covers. Other flow alterations indicates situations where dams or water withdrawals affect the quantity of water in a stream, or where channelization has degraded the natural hydrologic diversity, substrate and instream cover. Non-native species indicates situations where invasive species such as Asian Carp or Eurasian Water Milfoil directly impact native aquatic life. For these nonpollutant causes, neither the contributing cause nor their effect is related to a pollutant. If monitoring data indicate that no designated use is impaired by a pollutant, these waterbodies are not required to be included on the 303(d) List and would be placed in category 4C. In general, Illinois EPA delists entire water bodies only in the following cases: 1) data indicates that no designated use is impaired by a pollutant; 2) all pollutant causes of impairment have been addressed by approved TMDLs; or 3) all the designated uses are assessed as fully supporting. Table C-30 of the IR lists all segment/pollutant combinations listed in the 2004 303(d) List but not included with the 2006 submission.

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[10] See conversation record between U.S. EPA and IEPA on March 16, 2006.

[11] See e-mail between Donna Keclik and Cary McElhinney on ADB requirements, May 9, 2006. ADB does allow for the listing of these impairments. However, the way IEPA has set up their system – to track pollutants but not impairments -- does not allow IEPA to place these impairments in category 5. These impairments are tracked in appendix B of the IR and will be addressed when the TMDL is developed.

Waters listed for impairment not caused by a pollutant

U.S. EPA recognizes that the State may have included some WQLSs on the 303(d) list that are beyond those that are required by federal regulations, e.g., waters where the State demonstrates that failure to meet an applicable water quality standard is not caused by a pollutant, but instead is caused by other types of pollution. While U.S. EPA is not taking any action to approve or disapprove the States list due to the inclusion of such waters, neither the State nor U.S. EPA has an obligation under current federal regulations to develop TMDLs for such waters because the waters are not impaired by a pollutant as defined by CWA. The State should consider scheduling these waters for monitoring to confirm that there continues to be no pollutant-caused impairment and to support appropriate water quality management actions to address the causes of the impairment. The State has the discretion under Section 303(d) of the Act, which charges States with the primary responsibility to identify WQLSs for TMDL development, and Section 510 of the Act, which authorizes States to adopt more stringent pollution controls, to include waters on their Section 303(d) lists that may not be required to be included by current U.S. EPA regulations; and U.S. EPAs regulations do not compel the Agency to disapprove the States list because of the inclusion of such waters. U.S. EPA guidance also recognizes that States may take a conservative, environmentally protective approach in identifying waters on their Section 303(d) lists.

C. Consideration of Existing and Readily Available Water Quality-Related Data and Information

40 C.F.R. §130.7(b)(5) describes the data and information that each state should consider in developing its 303(d) list. U.S. EPA has also provided guidance on sources of data and information that states should consider. Each state "should maintain a record of their decision process not to use specific data or information for a specific water in developing its list."[12]

U.S. EPA has reviewed Illinois' description of the data and information it considered for identifying waters, Illinois' methodology for developing the list, and other relevant information submitted by IEPA. U.S. EPA concludes that the State of Illinois properly assembled and evaluated all existing and readily available data and information, including data and information relating to the categories of waters specified in 40 C.F.R. §130.7(b)(5). In addition, the State provided its rationale for not relying on particular existing and readily available water quality-related data and information as a basis for listing waters.

Generally, in the 2006 IR, IEPA only assessed surface waters for which new information had become available since the 2004 report, which was based mostly on data collected through September 2002. All new information collected by IEPA or submitted to IEPA was reviewed for quality assurance prior to use in the 2006 IR. The new information

[12] See U.S. EPA's "Guidance for 2004 Assessment, Listing and Reporting Requirements Pursuant to Section 303(d) of the Clean Water Act" (July 21, 2003), pages 20-21.

used for this IR consists mainly of biological, water, sediment, physical habitat, and fish-tissue information collected through 2003 (some in 2004) from various state monitoring programs.[13] To assess primary contact use, Illinois EPA uses all fecal coliform bacteria from water samples collected in May through October, over the most recent five-year period (i.e., 2000 through 2004 for this report).

The programs at IEPA used to collect data include: the Ambient Water Quality Monitoring Network, Intensive Basin Surveys, Facility-Related Stream Surveys, the Ambient Lake Monitoring Program, the Illinois Clean Lakes Monitoring Program, the Volunteer Lake Monitoring Program, and the Lake Michigan Monitoring Program. Similarly, chemical and biological data were collected on groundwater resources throughout the state. Groundwater-quality monitoring programs include the Ambient Network of Community Water Supply Wells (CWS Network), the Pesticide Monitoring Subnetwork of the CWS Network, the Rotating Monitoring Network, and the Dedicated Pesticide Monitoring Well Network.

To assess surface waters, Illinois EPA routinely considers physico-chemical water data provided by the city of Chicago (Lake Michigan data), the United States Geological Survey, and the Lake County Public Health Department. The 2006 IR also identifies seven additional sources of data used for assessments: Metropolitan Water Reclamation District of Greater Chicago, Fox River Study Group, Sinnissippi Coalition for Restoring the Environment (Rock River Water Reclamation District), Tri-County Regional Planning Commission, Wheaton Sanitary District, Thorn Creek Basin Sanitary District, and Syngenta Crop Protection, Inc. All of these datasets included adequate quality assurance documentation.

Data not used by IEPA

The Lake County Stormwater Management Commission provided physico-chemical surface water data, but did not include adequate quality assurance documentation. This dataset was considered but not used for assessments in the 2006 IR.

Based on Illinois EPA review of surface-water results analyzed by Illinois EPA laboratories, some available data failed to meet quality control criteria or failed to meet data quality objectives. The Illinois EPA intends to further review the results of samples collected after 12/31/2003, and therefore does not intend to use the data until a complete review of samples has been conducted. Datasets not used were: ammonia collected from 01/01/1997 through 12/31/1999 and 10/01/2002 through 12/31/2003; phenols and total Kjeldahl nitrogen data collected from 01/01/1999 through 12/31/2003; and phosphorus, nitrate/nitrite, chloride, alkalinity, sulfate, cyanide, chlorophyll, total suspended solids, volatile suspended solids and total dissolved solids collected from 10/01/2002 through 12/31/2003.

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[13] The state depends on several different monitoring programs with in the IEPA. IEPA's "*Surface Water Monitoring Strategy*" (IEPA 2002) provides a detailed discussion of each of these programs. The *Surface Water Monitoring Strategy* has six different programs for streams and three programs for lakes and one program for Lake Michigan. Pages 29 through 34 of the IR discuss these programs.

The State did not use data collected through the Volunteer Lakes Monitoring Program ("VLMP") to add any waters to the 303(d) list because these data are not collected under an approved Quality Assurance Project Plan (QAPP). Therefore, VLMP data do not have the degree of reliability the State deems necessary for listing a waterbody on the 303(d) list. VLMP data by itself is also not used to remove a waterbody from the 303(d) list. The primary purpose of this is to promote education on lake issues. The data is also used in evaluating lake resource quality as good, fair or poor .

In January 2005, Illinois EPA developed "Guidance for Submittal of Surface Water Data For Consideration in Preparing the 2006 Integrated Report on Illinois Water Quality." This guidance and associated data-solicitation information were made available on the Illinois Environmental Protection Agency website (www.epa.state.il.us/water/water-. quality/guidance.html). The guidance describes the required format for data packages and associated quality assurance documentation and provides instructions on how and when (by February 28, 2005) to submit data for consideration for assessments in this report. The guidance document and associated data-solicitation information was sent to over 100 individuals and organizations representing watershed groups, wastewater facilities, environmental consultants, universities, environmental groups, various governmental organizations, participants on various Illinois EPA workgroups, and people who commented on previous 303(d) lists.

D. Delisting of Waters

In addition to the changes to the list resulting from changes in assessment and listing methodologies, reviewed in Section II.B above, certain waters were delisted in the 2006 IR. U.S. EPA reviewed these delistings, and concludes that they meet the requirements of CWA Section 303(d) and U.S. EPA's implementing regulations.

A state can remove WQLSs from the 303(d) list for good cause. Good cause includes, but is not limited to: more recent or accurate data; more sophisticated water quality monitoring; flaws in the original analysis that led to listing of the water; or changes in conditions.[14]

IEPA delisted waters for the following reasons:

1. The water quality standard is being met.
2. Flaws in original listing[15].
3. Impairment due to nonpollutant (4C).
4. U.S. EPA approval of a TMDL (4A).

[14] See 40 C.F.R.§ 130.7(b)(6)(iv)

[15] Flaws include errors in listing, listing waters that were never assessed, changing pollutants from general categories (i.e. unspecified nutrients) to specific pollutants (i.e. phosphorus).

5. Other relevant information that supports the decision not to include the segment on the section 303(d) List.[16]

Previously listed waters/impairments

Illinois identified 21 previously listed waters that have been assessed as fully supporting the use for which they had been previously listed. New data and information indicate that applicable water quality standards are being met. U.S. EPA concludes that the State has demonstrated good cause for not including these waters on its 2006 303(d) list. Waters identified in Table C-30 as Segment Category 2 fall into this group.

Illinois also identified 26 waters in Table C-30 which were inaccurately listed on previous 303(d) lists. These waters were placed into Segment Category 3 (3 waters which equate to 12 waterbody/impairment combinations) or Segment Category 4C (23 waters which equate to pervious 30 waterbody/impairment combinations). Illinois provided U.S. EPA with additional information to explain the basis for these delistings.[17] Waters were moved to Category 3 based on flaws in the original listing, which were identified upon reviewing the data originally relied upon for listing. Waters moved to Category 4C had been listed for nonpollutant impairments, a change in methodology addressed in Section II.B, above.

Previously identified pollutants being removed as causes

States must identify the "pollutants causing or expecting to cause violations of the applicable water quality standards" on the 303(d) list for each WQLS.[18] Illinois has met this requirement. As previously discussed, the causes identified on Illinois' 303(d) list include the pollutants or pollution causing or expecting to cause violations of applicable water quality standards.

For some waters identified on Illinois' 2006 303(d) list, the causes of impairment are different from the causes identified on previous 303(d) lists. Changes in causes between a previous list and the 2006 303(d) list result from: changes to standards; changes to methodologies for determining whether standards are being met; and/or new data and information. The state removed 1115 waterbody/impairment combinations. However, most of these waterbodies remain on the list due to other impairments. A total of 182 waterbody/impairment combinations were removed from category 5 and waterbodies were placed in one of the following four categories: 2, 3, 4C and 4A. Of these, 83 waterbody/impairment combinations were placed in Categories 2, 3, and 4C; and 99 waterbody/impairment combinations were placed in category 4A (having a TMDL

[16] See e-mail between Bruce Yurdin, IEPA and Donna Keclik, U.S. EPA dated June 5, 2006, identifying other relevant information used to determine listing.

[17] See e-mail between David Muir, IEPA and Donna Keclik, U.S. EPA dated April 30, 2006.

[18] 40 C.F.R. § 130.7(b)(4).

approved for that waterbody/pollutant combination). This resulted in 74 waters being completely removed from the list.

Table C-30 of the IR also identified fourteen waterbody/impairment combinations which were being delisted. These waterbody/impairment combinations were not on the 2004 303(d) list approved by U.S. EPA. IEPA identified these segments in reviewing the data being entered into the new database for consistency with U.S. EPA's ADB. Some of these waters should have been on the 2004 list, but are now meeting standards. Other waterbody/impairment combinations were discovered during the course of TMDL development when the state gathered more data. The TMDL addressed these new pollutants.[19]

U.S. EPA concludes that it is reasonable for the State to consider data collected for each of the water body's uses, current standards, assessment methodologies and data for identifying pollutants that are causing violations of applicable water quality standards.

Comments received by IEPA on specific waters

IEPA received comments on four specific waterbodies. The following is the rational for listing or not listing these waterbodies.

1. Horseshoe Lake

Several comments were received by IEPA identifying the public's concern for the well-being of Horseshoe Lake and the potential causes of impairment for this waterbody. IEPA included Horseshoe Lake in Category 5 of the IR. The state also included the potential causes of each pollutant in Category 5. The state did indicate that when a TMDL is developed it would identify and document all sources of impairment. The state is in the process of developing the TMDL for Horseshoe Lake.

2. Frank Holten *(Sic.)* State Park

A comment was received stating that two years ago, the IDPH web site said that Frank Holton State Park had a statewide fish advisory and that fish from the lake had tested positive for mercury. The state responded by stating the data recently collected by the Fish Contaminant Monitoring Program were negative for mercury. The listing is based on detection of polychlorinated biphenyls (PCBs), not mercury, in recent samples.

3. Schoenberger Creek

A comment was received concerning the red color of Schoenberger Creek and noting that the creek was not on the 303(d) list. The state responded that the Illinois Pollution Control Board issued a site-specific water quality standard for the creek effective in 1983.

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[19] See e-mail between Jennifer Clarke, IEPA and Donna Keclik, June 9, 2006, for a list of waterbodies/pollutant combinations and reasons why these were not on the 2004 list.

The red coloring is due to the high water table and high iron content, and U.S. EPA understands that the waterbody is meeting this standard.

4. Hampshire Creek

The Village of Hampshire commented that Hampshire Creek should not be listed based on the upgrade to the Village's WWTP and data submitted by the Village. The State responded stating that downstream of the WWTP is not attaining full aquatic life use and is impaired for nickel, total dissolved solids and phosphorous. Therefore, Hampshire Creek will remain on the list.

Threatened Waters

IEPA was asked if it intended to develop protocols for identifying threatened waters. IEPA responded that U.S. EPA defines a threatened water as one that is already impaired. This is not accurate. As stated in U.S. EPA's Integrated Report Guidance, at page 59:

> The definition of "water quality limited segment" in U.S. EPA's regulations implementing CWA Section 303(d) includes waters not expected to meet applicable water quality standards, which U.S. EPA refers to as "threatened" waters. 40 CFR 130.2(j). U.S. EPA recommends that states consider as threatened those segments that are currently attaining WQS, but are projected as the result of applying a valid statistical methodology to exceed WQS by the next listing cycle (every two years). . . . The state assessment and listing methodology should describe how the state identifies threatened segments.

With respect to its assessment and listing methodology, IEPA states that it does not collect enough data to conduct trend analysis, and therefore does not identify threatened segments at this time. U.S. EPA recommends that IEPA develop a methodology to identify threatened waters, but this deficiency is not grounds for disapproval of Illinois' Section 303(d) list.

E. Waters Included on the List Which May be in Indian Country.

U.S. EPA's approval of Illinois' Section 303(d) list extends to all waterbodies on the list with the exception of those waters that are within Indian Country, as defined in 18 U.S.C. Section 1151. U.S. EPA is taking no action to approve or disapprove the State's list with respect to those waters at this time. U.S. EPA, or eligible Indian Tribes, as appropriate, will retain responsibilities under Section 303(d) for those waters.

F. State's Listing of Waters Impaired by Nonpoint Sources

U.S. EPA has also determined that the State properly listed waters with nonpoint sources causing or expected to cause impairment, consistent with Section 303(d) of the Act and U.S. EPA guidance. Section 303(d) lists are to include all WQLSs still needing TMDLs, regardless of whether the source of the impairment is a point and/or nonpoint source. U.S. EPA's long-standing interpretation is that Section 303(d) applies to waters impacted

by point and/or nonpoint sources. In *Pronsolino v. Marcus*, the District Court for the Northern District of California held that Section 303(d) of the CWA authorizes U.S. EPA to identify and establish total maximum daily loads for waters impaired by nonpoint sources.[20]

G. Priority Ranking and Targeting

U.S. EPA has reviewed the State's priority ranking of listed waters for TMDL development, and concludes that the State took into account the severity of pollution and the uses to be made of such waters. Illinois' prioritization process was done on a watershed basis instead of prioritizing individual waters or water segments. The State's prioritization process is a three-step process. The first step looks at the designated uses within a watershed which are not being met and assigns a high, medium, or low priority, with public and food processing water supply use being high priority. The next step takes into account the severity of pollution by considering the number of potential causes of impairments for each water within the watershed. The last step prioritizes the watersheds within the three priority groups established in the first step, by considering the water body's potential for improvement and the degree of public support for water body improvement. Waters where the potential causes have no numeric standards, interstate waters, waters with legacy pollutants, waters impaired by natural background levels, and waters for which the cause of use impairment is unknown are prioritized below other waters.[21]

Title 40 C.F.R. § 130.7(b)(4) requires the 303(d) list to identify "waters targeted for TMDL development in the next two years." U.S. EPA refers to this identification as the two-year schedule. The State provides its two-year schedule in Table C-29 of the IR. U.S. EPA reviewed the State's two-year schedule and concludes that the State has identified those WQLSs targeted for TMDL development and completion in the next two years.

U.S. EPA has received Illinois' long-term schedule for TMDL development for all waters on the 303(d) list. As a policy matter, U.S. EPA has requested that States provide such schedules.[22] U.S. EPA is not taking any action to approve or disapprove this schedule pursuant to Section 303(d). The long-term schedule reflects the State's prioritization. TMDLs for watersheds are scheduled from 2006 to 2019, with all TMDLs to be initiated no later than 2019.

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[20] See Pronsolino et al. v. Marcus et al., 91 F. Supp.2d 1337, 1347 (N.D. Ca. 2000); see also U.S. EPA's 1991 Guidance; see also National Clarifying Guidance for 1998 Section 303(d) Lists (August 17, 1997).

[21] See pages 85 through 87 of the 2006 IR.

[22] See Memorandum from Robert Perciasepe, Assistant Administrator for Water, to Regional Administrators and Regional Water Division Directors, "New Policies for Developing and Implementing TMDLs" (August 8, 1997).

II. Public Participation

Illinois EPA conducted a public hearing on Wednesday January 25, 2006, at 1021 North Grand Avenue East, Springfield. The purpose of the hearing was to provide an opportunity for the public to submit comments on the draft 2006 IR. Nineteen non-Agency people attended, which included representatives of consulting firms, environmental organizations, sanitary districts, energy interest, academia and USDA.

The hearing record remained open for written comments postmarked through midnight February 24, 2006. Under the Illinois Administrative Code, the Hearing Officer sets the date when the hearing record will close; and unless the Hearing Officer provides otherwise, this date is 30 days from the date of the last scheduled hearing.[23] For the 303(d) hearing record, the Hearing Officer provided that the record would remain open for 20 days after the hearing.

A responsiveness summary is included in Appendix F of Illinois' 2006 IR. The responsiveness summary provides Illinois EPA's response to comments and questions from the public hearing and written comments and questions. U.S. EPA asked for further clarification of certain responses, and IEPA's clarification is included in the administrative record for this Decision Document.

The hearing was announced in the Edwardsville Intelligencer (state newspaper) on December 22 and 30, 2005 and January 7, 2006.

The hearing notice was sent via first class mail to persons and groups on lists provided by:

- Bureau of water, Division of Water Pollution Control
- Illinois EPA Office Community relations

Prairie Rivers Network carried the announcement on their web-server. The public hearing notice was featured on the Illinois EPA Internet web site (http://www.epa.state.il.us).

All Illinois EPA regional offices posted the hearing notice in a public area.

Illinois provided public notice of availability of the draft IR for comment, including the draft 303(d) list, on the State website for a minimum of 30 days. The comment period began on or about December 28, 2005, and the record was closed on February 25, 2006.

[23] 35 Ill. Adm. Code § 164.203(e).