Appendix F
Responsiveness Summary

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Bureau of Water
Impaired Waters of Illinois
Section 303(d) List
Responsiveness Summary

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF:	)	
Impaired Waters of Illinois	)	
Draft 2006 Integrated Report	)	IEPA File 6-06

BACKGROUND INFORMATION

The Illinois Environmental Protection Agency (Illinois EPA or Agency) conducted a public hearing at 10 a.m. on Wednesday, January 25, 2006 in the Illinois EPA Training Room, located at 1021 North Grand Avenue East, Springfield, Illinois. The purpose of this hearing was to provide an opportunity for the public to comment on the Bureau of Water (BOW) draft 2006 Integrated Report.

The Illinois EPA is required under Sections 303(d), 305(b) and 314 of the federal Clean Water Act to assess waters of the state and evaluate compliance with applicable water quality standards and designated uses. Waters that are assessed as not achieving those standards are identified on the Integrated Report.

Waters identified in the Integrated Report in accordance with Section 303(d) are deemed impaired for specific chemical constituents and consequently additional loadings (i.e., discharges) of those constituents may be restricted. In addition to possible restrictions on future loadings to these listed waterbodies, waters identified in the Section 303(d) list are subject to the development of Total Maximum Daily Loads (TMDLs). TMDLs in Illinois may take the form of a watershed study in which the chemical constituent causing impairment to that water body is evaluated. A TMDL is the sum of the allowable amount of single pollutant that a waterbody can receive from all contributing sources and still meet water quality standards of designated uses.

PRE-HEARING OUTREACH

Pursuant to the federal regulations for public participation in 40 CFR 25, the hearing was announced in state publications including:

- *Edwardsville Intelligencer* (state newspaper) on December 22 and 30, 2005, and January 7, 2006.

The public 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 listed the announcement on their web-server. The public hearing notice was featured on the IEPA Internet Web Site www.epa.state.il.us. All Illinois EPA regional offices posted the hearing notice in a public area.

PUBLIC HEARING AND HEARING RECORD

The 19 non-Agency persons in attendance at the January 25, 2006 hearing represented consulting firms, environmental organizations, sanitary districts, energy interests, academia and the USDA.

Hearing officer Scott Ristau opened the hearing at 10 a.m. Bruce Yurdin describes the Draft 2006 Integrated Report. Questions and comments were received from the public. A panel of Agency staff responded to the questions. Hearing officer Scott Ristau closed the hearing shortly before noon. Agency staff were available to meet with the public before and after the hearing.

The hearing record remained open for written comments postmarked through midnight February 24, 2006. This responsiveness summary provides the Agency response to comments and questions from the public hearing and written comments and questions received while the hearing record was open.

Questions and Comments

IDENTIFICATION OF THREATENED WATERS

1. Comment: Does the Illinois EPA intend to develop protocols for identifying threatened waters?

Response: The U. S. Environmental Protection Agency (USEPA) defines a threatened water as one that is already impaired. The Illinois Environmental Protection Agency (Illinois EPA or Agency) disagrees with this definition. In the Illinois EPA's opinion, a threatened water is one that fully supports its uses, but trend data indicate that the water quality is declining. Since the Illinois EPA is not conducting trend assessments, there is no information on which to base a determination that the quality of a waterbody is declining.

In the future, if the Illinois EPA collects good data for trend analysis, the Agency will consider reinstituting the designation of "threatened" waters. Currently, however, the Illinois EPA has no plans to reinstitute trend analysis and therefore has no plans to reinstate the designation of "threatened" waters.

2. Comment: Who in the past conducted trend analysis?

Response: The Surface Water Section of the Agency's Bureau of Water.

EVALUATION OF IMPAIRMENT

Aesthetic quality

3. Comment: Does the Agency intend to develop protocols for assessing the aesthetic quality of streams?

Response: The Agency has no plans to develop a protocol for assessing the aesthetic quality of streams. The Agency has always assessed the "recreational use" of lakes. That has been transferred into what is now called the "aesthetic use" assessment. The Agency has never assessed the aesthetic use of streams but could consider making that assessment in the future.

4. Comment: On page 84 of the draft Integrated Report, Table C-27 lists zero stream miles for Category 1, which apparently means all uses are supported. Is that correct?

Response: Yes, that is correct. In order for there to be stream miles with all uses supported, all uses must be assessed. There may be many stream miles with all uses supported, but since the Agency currently does not have a method to assess the aesthetic quality of streams, streams would be listed in the "not-assessed" category. These are USEPA's definitions.

5. Comment: It would be helpful if the Agency would insert a statement into the report that would explain and clarify why no stream miles are categorized as having all uses supported.

Response: We will revise the report accordingly.

6. Comment: We support the addition of the Aesthetic Quality use and request assurance that this use will be assessed for all waters of the state. Illinois water quality standards at

IL Admin Code 302.203 and 302.403 for General Use waters and Secondary Contact and Indigenous Aquatic Life waters, respectively, contain nearly identical requirements that waters shall be free of unnatural sludge, bottom deposits, visible oil, odor, plant or algal growth, color or turbidity. We feel that this assessment of the Aesthetic Quality use will be an important way to assess compliance with this narrative standard. Because the use was not assessed for streams in this report, we would like IEPA to clarify its intended process and timeline for developing protocols for assessment of this use. While table B-5 of the report identifies only the General Use Standards and Lake Michigan Basin Standards as water quality standards applicable to assessment of the Aesthetic Quality use, we would also like assurance that this use will be applied to those waters designated as Secondary Contact and Indigenous Aquatic Life waters consistent with the regulations cited above.

Response: In this Report a new use called *aesthetic quality* was associated with all waterbodies in the state. Based on the definition of "secondary contact" in 35 Ill. Adm. Code 301.380 and on how this use is assessed in inland lakes, we determined that the assessment methodology that had been used for assessing secondary contact recreation in inland lakes was more appropriate for assessing *aesthetic quality* use. Therefore, all previous assessments of secondary contact recreation in inland lakes were changed to assessments of *aesthetic quality* use. (See Section C-2 for more information.) We have not determine how to assess such a use in streams.

Manganese

7. Comment: Why is manganese ranked so high as a potential cause of impairment? Has this always been the case?

Response: The Agency is not sure if manganese is a greater source of impairment than in the past. It probably is not. Previously, the Agency did not list the metals separately, but listed them as a group. The Agency has conducted some TMDLs for manganese and looked at background levels in soils. The levels of manganese may be related to background soil conditions around the state. We may need to conduct more thorough evaluations of manganese to separate impairments caused by naturally occurring background soil levels from those that may be due to anthropogenic causes.

8. Comment: Was impairment due to manganese considered when establishing priority list for TMDLs?

Response: No. Because manganese is so prevalent and its origin is somewhat in question (naturally occurring versus man-induced), the Agency did not use manganese to identify the priority list.

Poor, fair and good designations

9. Comment: Are the "fair" and "poor" designations used in this year's report equivalent to "partially supporting" and "non-supporting" designations used in previous years? Is there any practical consequence of this change?

Response: You are correct. The "fair" and "poor" categories are equivalent to the "partial supporting" and "non-supporting" categories used in previous reports. The new USEPA guidance for the Integrated Report does not allow the use of "partial-supporting" as a designation. The Illinois EPA felt that the public needed to know that "non-supporting" waters are not all equal--that there are degrees of impairment. The Illinois EPA adopted the system of designating water as "good," "fair" and "poor" as a means of conveying these distinctions.

10. Comment: Are those waters described as 'poor" going to be on the next priority list for TMDLs?

Response: Not necessarily. The categorization of a water as "good", "fair" and "poor" did not carry as much weight in listing for TMDLs as did the number of impaired constituents and the designated use for those waters.

Phosphorus and nutrients

11. Comment: Does Illinois EPA envision that improvements to indigenous aquatic life uses would result for the Chicago Area Waterways if lower phosphorus standards were applied to final WRP effluents? Does Illinois EPA expect that the biological or chemical integrity of these waterways would improve? Would the existing habitat quality improve?

Response: The issue as to whether a reduction in phosphorus effluent concentrations would be practical and beneficial was recently decided by the Illinois Pollution Control Board. Prior to the adoption of a final rule modifying Ill. Adm. Code 304.123 (g) through (k), the Board took testimony on the matter of potential improvements to aquatic life as a result of a new phosphorus standard. Although this new rule is to be an "interim" standard, to take effect while nutrient water quality standards are under development, the Board found sufficient justification in this proposal to adopt the new rule on January 19, 2006. It is unlikely that habitat quality will be measurably affected by the interim phosphorus rule.

12. Comment: Phosphorus (total), nitrogen (total), and total suspended solids are listed as potential causes of indigenous aquatic life use impairment in Chicago area waterways. A statistical guideline is given as the reason for this decision, with the explanation, in the

footnotes to Table C-4 (for aquatic life use) and Table C-11 (for indigenous aquatic life use), that "Statistical guidelines for substances in stream water are based on 85-percentile values determined from a statewide set of observations from the Ambient Water Quality Monitoring Network, for water years 1978—1996." The use of an arbitrary statistical guideline is not scientifically defensible. We have these questions:
i) Were any biological or chemical criteria, rather than just the statistical guidelines, used to make these decisions of impairment?
ii) If the statistical guidelines were the only reason to list total phosphorus, total nitrogen and total suspended solids as impaired for aquatic life and indigenous aquatic life in Chicago area waterways, why was the 85-percentile value chosen and what biological or chemical significance does this level have?

Response: Regardless of the water body in question, the decision to list a stream segment as impaired was based on either biological data that did not meet the criteria in Table C-1, biological data in combination with habitat data that did not meet the criteria in Table C-2, or failure to meet Section 302 water quality criteria with frequencies described in Table C-3. Silt/mud is the only parameter listed in Table C-4 as a "Statistical Guidelines" that could potentially factor into the impairment decision. The other parameters listed under statistical guidelines are not used to determine whether or not the stream segment is impaired.

However, after a stream segment has been identified as impaired, staff review other factors that do not have numeric water quality standards as potential contributors to the impaired condition. These include nutrients such as phosphorus and nitrogen, turbidity, suspended solids, contaminants in bed sediments and physical habitat. The Illinois EPA uses the statistical guidelines for these parameters to enhance consistency in their listings on a statewide basis.

13. Comment: Sediment concentrations of total phosphorus (as TKN), pesticides and other organic pollutants (such as PCBs), and metal pollutants are listed as potential causes of indigenous aquatic life use impairment in Chicago are waterways based on statistical guidelines. The footnotes to Table C-11 on page 60 state that "Criteria for substances in stream sediment represent the minimum threshold of 'highly elevated' levels." The Illinois EPA has not adequately explained the basis for these thresholds. We have these questions:
i) Were any biological or chemical criteria, rather than just statistical guidelines, used to make these decisions of impairment for both phosphorus and PCBs in sediment within the Chicago area waterways?
ii) Is Illinois EPA aware of real biological or chemical examples that would justify these decisions of impairment based on the minimum threshold of "highly elevated levels" for both phosphorus and PCBs in sediment?

Response: See response to comment 12.

14. Comment: On page 58, the Integrated Report states that assessments of indigenous aquatic life use rely on 'frequency of exceedance' guidelines, because these guidelines represent the true risk of impairment to aquatic life better than would a single exceedance of a water quality criterion. This statement does not explain actual biological or chemical causes of impairment. What is the definition of "true risk" in terms of biological or chemical effect?

Response: The word "true" could be deleted without affecting the intended point. The quoted statement refers specifically to Illinois EPA's use of a 10-percent exceedance rate of any applicable numeric ("chemical") water quality standard as an assessment guideline. Illinois EPA judges that a single exceedance of an applicable water quality standard is a less reliable representation of the existence of impairment than is an exceedance rate of >10%. Analogously, a sound medical diagnosis of hypertension requires more than a single observation of high blood pressure in a patient. Typically, Illinois EPA does not use biological information in the assessment of Indigenous Aquatic Life Use.

15. Comment: Does the Illinois EPA envision improvements to indigenous aquatic life in the Chicago area waterways if lower phosphorus standards were applied to final water reclamation plant effluents? Does the Illinois EPA expect that the biological or chemical integrity of these waterways would improve? Would the existing habitat quality improve?

Response: If excessive phosphorus and degraded physical habitat, both attributable to human activity, are contributing to impairment of Indigenous Aquatic Life Use, then alleviating one of these factors is a necessary but not sufficient step toward achieving "full support" of this use. However, a rating of "full support" is not the only criterion for judging if meaningful, beneficial improvement has been achieved. If one of two known causes of impairment is alleviated, then improvement obviously has occurred, regardless of the use-support rating.

16. Comment: Phosphorus and PCBs in sediments are listed in the <u>Integrated Report</u> as potential causes of indigenous aquatic life use impairment in Chicago area waterways based on statistical guidelines. The report states in the footnote to Table C-11 on page 60 that "Criteria for substances in stream sediment represent the minimum threshold of highly elevated levels". Were any biological or chemical criteria used as the basis for the decision about PCBs and phosphorus in sediment as the causes of impairment in Chicago waterways or is this conclusion based solely on statistical guidelines?

Response: See response to comment 12.

17. Comment: Is the Illinois EPA aware of real biological or chemical examples that would justify these decisions of impairment based on the minimum threshold of highly elevated levels for both phosphorus and PCBs in sediment?

Response: See response to comment 12.

18. Comment: IEPA should revise its procedures for identifying potential causes of impairment to be consistent with USEPA's guidance criteria for phosphorus and nitrogen. IEPA should use the guidance criteria proposed by USEPA as thresholds for identifying nitrogen and/or phosphorus as potential causes of impairment because these numbers are based on extensive study of reference conditions. Moreover, research results that are beginning to emerge to support nutrient standards development confirm that increased unnatural algal growth and adverse affects on aquatic life are seen as concentrations of phosphorus approach the USEPA criteria numbers. Given that the thresholds that IEPA has been using are based neither on reference conditions nor cause/effect studies, the USEPA guidance criteria would serve as better thresholds.

Response: The Agency currently uses the adopted phosphorus standard for lake assessments and the 85 percentile of data collected in Illinois streams to assess stream impairment. While we do not agree with the manner in which USEPA established the national nutrient criteria, it too is a statistical representation of a larger data set. The federal data set was taken from very broad regions (ecoregions) that may or may not represent conditions in Illinois. Research now underway for Illinois nutrient standards development tends to indicate that other factors (e.g., sunlight, turbidity and substrate) control algal populations more than does nutrient concentration. We will await the outcome of the research prior to making any changes in the assessment criteria for Illinois waters. We also note that nutrients, like other potential causes, are only identified as such when IBI and MBI data indicate biotic integrity is impaired. We believe this is a better indicator of nutrient enrichment than water chemistry criteria.

Algal Growth

19. Comment: The removal of algae as an impairment pollutant is inconsistent with USEPA's guidance as outlined on page 89 of the draft Integrated Report, and its removal is arbitrary.

Response: The term "pollutant" is defined in Clean Water Act, Section 502(6) and is broadly intended to mean a substance or material introduced into a waterbody by human activity. Aquatic algae is not a pollutant, does not require a TMDL and USEPA guidance does not require nor suggest that such non-pollutants to be placed on the 303(d) List. When a non-pollutant cause of impairment has been previously listed, USEPA guidance specifically allows such non-

pollutants to be delisted. However, when excessive aquatic algae does impair a beneficial use of a waterbody it will still be identified as a cause of impairment.

20. Comment: Algal growth impairment criterion should not be removed prior to establishing water quality criteria for those nutrients that induce algal growth. While not a pollutant, algal growth is a measurable indicator of elevated levels of nutrients such as nitrogen and phosphorous in a waterbody. Without providing nutrient criteria or maintaining the designation of impairment for excess algal growth, the Illinois EPA will essentially allow unchecked amounts of nutrients in a waterbody.

Response: The Agency currently uses specific numeric criteria to identify those pollutants (such as nutrients) that may be contributing to excessive algal growth. The criterion for phosphorus in lakes is a water quality standard specifically intended, in part, to protect lake uses from impairment by excessive algal growth. Furthermore, the Agency is not removing or in any way changing its existing criteria for identifying excessive algal growth as a potential cause of impairment. When data indicate, aquatic algae will continue to be identified as a non-pollutant cause of impairment. In the vast majority of cases, when aquatic algae is listed as a cause of impairment, other pollutants—such as phosphorus or nitrogen—are also identified as contributing causes of impairment. The cause of aquatic algae will be addressed when TMDLs are developed for those contributing pollutant causes. The Agency is not automatically replacing the "algal growth" criterion with a criterion of nutrients that might cause algal growth. The Agency must follow specific federal guidelines to list a pollutant as a cause for impairment. The Agency, however, takes the non-pollutant causes seriously. For example, the reason for doing a TMDL on phosphorous for Horseshoe Lake is because of the excess aquatic algae.

21. Comment: According to page 2 of Appendix B-2 of the 2006 Draft Integrated Report, all inland lakes statewide are subject to monitoring for nitrogen/nitrate, nitrogen (total), and ammonia impairment. However, though the report frequently indicates nitrogen-based impairments for streams, it does not list any lakes as impaired for any of these pollutants under any designated use. We believe that special consideration should be given to the nitrogen impairment threshold of Horseshoe Lake due to the presence of the Granite City Steel point source that discharges nitrogen-based compounds, namely ammonia. If excessive algal growth is removed as an impairment, there is no way to confirm that the goal of reducing excessive algal growth is actually occurring. Maintaining excess algal growth as an impairment provides a safety net in case the TMDLs established for phosphorous and nitrogen are inadequate.

Response: The impairment "excessive algal growth" is identified by the Illinois EPA using specific criteria. Table C-7 describes the type and application of data collected for the determination of aquatic life use in Illinois lakes, including information on data concerning algal populations. While nutrient impairment is linked chemically to algal growth, these impairments can be identified and listed independently. Page 2 of Appendix B-2 makes no statement with

regard to nitrogen monitoring at Illinois lakes. However, monitoring for various forms of nitrogen is part of most lake monitoring programs conducted by the Agency. While it is true that nitrogen based impairments are somewhat less common in lakes than streams, Table C-37 indicates that 4,508 lake acres are identified as impaired by nitrate-nitrogen; 3,783 lake acres have been identified as impaired by nitrogen (total); and 2,048 lake acres have been identified as impaired by ammonia (total). Monitoring at Horseshoe Lake has not found these pollutants at levels that would indicate they are causing an impairment. We will continue routine monitoring for these pollutants at Horseshoe Lake and if warranted they will be identified as causes of impairment.

22. Comments: In order to protect the water quality standards and designated uses of Horseshoe Lake, American Bottoms Conservancy requests that a TMDL for phosphorous be quickly produced and a TMDL for nitrogen be developed which take into consideration stormwater from Granite City, agricultural runoff, and discharges by Granite City Steel.

Response: The TMDL currently being developed for phosphorus in Horseshoe Lake will address the various sources of this contaminant. In developing this TMDL, the public will be advised or our findings and recommendations, and will be asked to review and comment on the TMDL reports at several steps in the process. Nitrogen has not been identified as a cause of impairment.

23. Comment: Horseshoe Lake has been included on the EPA approved list of 303(d) waterbodies as impaired since 1998. According to the 2004 version of the list, Horseshoe Lake is impaired for phosphorus, pH, TSS, heptachlor, PCBs, zinc, excess algal growth, and non-native aquatic life. In the current draft, Illinois EPA proposes to remove the excess algal growth and non-native aquatic life impairments. American Bottoms Conservancy requests that Illinois EPA retain the excess algal growth impairment as in the 2004 list.

Response: Illinois EPA continues to identify aquatic algae and non-native aquatic life as causes of impairment for Horseshoe Lake (Appendix B, Table B-2). However, neither of these are "pollutant" causes. The 303(d) List (Appendix A) contains only those impaired waterbodies and pollutants which require a TMDL. Although they were included on previous lists there is no requirement to develop a TMDL for these non-pollutants and they are being removed. However, removal from the 303(d) List does not affect their status as identified non-pollutant causes of impairment. Aquatic algae will be addressed by the TMDL for phosphorus. Illinois EPA will explore other means for dealing with non-pollutant causes that will not be addressed by TMDLs.

24. Comment: We disagree with Illinois EPA's proposal to remove algal growth as a category of impairment for Category 5 impaired waterbodies without substituting a

comprehensive nutrient impairment category. ABC requests that Illinois EPA fully retain the algal growth impairment, and all potential contributors to algal growth, as in the prior list. The algal growth impairment criterion should not be removed prior to establishing water quality criteria for all those nutrients that potentially induce algal growth in Horseshoe Lake. Illinois EPA's failure to do so may subject this waterbody to excessive nutrient loading and subsequent continued algal impairment.

Response: See the response to comment 20.

25. Comment: Why was algal growth removed as a stated cause of pollution for most of the report but maintained in Table C-34 ("Statewide Summary of Potential Causes of All Use Impairments in Streams") on page 133 as a cause for impairment of about 350 miles of stream?

Response: Aquatic algae is not being removed as a cause of impairment. This cause is still listed as a potential cause of impairment for streams and lakes (in Appendix Tables B-1 and B-2) where appropriate. Tables C-34 and C-37 summarize the total stream miles and lake acres impaired by aquatic algae. However, aquatic algae is a non-pollutant cause of impairment. All non-pollutant causes are being delisted from Illinois' 303(d) List because non-pollutants do not require TMDLs and the 303(d) List is a list of waters impaired by pollutants that require TMDLs.

26. Comment: We object to removal of waters from the list that fail to meet the criterion that requires no "unnatural algal growth" or fail to meet any other narrative criterion. Table C-30 of the Integrated Report indicates that the "Excess Algae" cause of impairment is being removed from the list because it is not a pollutant and therefore a TMDL analysis is not required for that impairment. However, given that excess algae is caused by pollutants, typically excess phosphorus and/or nitrogen, a TMDL is certainly required to address this impairment. Therefore, this impairment should not be removed from the list.

Response: The ADB does not support the use of this cause since it is not identified as a pollutant. Although aquatic algae is being delisted from the 303(d) List because it is not a pollutant, aquatic algae will still be identified as a cause of impairment where appropriate (Appendix B, Tables B-1 and B-2). Furthermore, the delisting of aquatic algae for this purpose will not remove any waterbodies from the 303(d) List because those pollutants that contribute to aquatic algae will still be listed. In those few instances where no contributing pollutant has been identified, an unknown cause is listed that will maintain the waterbody on the 303(d) List until future monitoring can identify the pollutant causing the impairment. (See also the answer to question 20).

Non-native fish.

27. Comment: Is the Agency no longer classifying non-native fish as a pollutant?

Response: Non-native fish are not a pollutant and therefore would not lead to a requirement to conduct a TMDL. If non-native fish, however, cause an impairment, they would be listed as a pollution cause.

28. Comment: Why were non-native fished dropped from the listing of Horseshoe Lake in Madison County?

Response: Non-native fish are not a pollutant.

Secondary Contact

29. Comment: What is meant by "secondary contact"?

Response: "Secondary contact" is incidental contact with water where water is not normally ingested. Examples of this type of contact are fishing and boating. The Agency has never evaluated streams for "secondary contact" because there were no acceptable criteria or standards. The Agency did evaluate lakes for "secondary contact" using primarily aesthetic criteria, such as "Is the water pleasant to look at?" or "Would one enjoy having a house on the lake?"

Since these are aesthetic qualities, "secondary contact" now is incorporated into the "aesthetic" evaluation of lakes that are assessed for primary contact. Primary contact means that people are using the waterbody where there is a likelihood that the water would be ingested. Swimming is an example of primary contact. If a waterbody fully supports uses involving primary contact, then secondary contact must also be fully supported.

30. Comment: If one were canoeing, one could fall out of the canoe and ingest water, or if one were fishing, one could slip and fall into the water.

Response: Primary contact is a greater level of protection than is necessary for someone who might occasionally fall into the water. Primary contact is protective of people who intentionally immerse themselves in water; for example, by swimming.

The Agency assesses primary contact in as many places as possible but cannot cover all 87,000 miles of streams in the state. Because of limited resources, however, the Agency only monitors and assesses about 15,000 miles of streams. These are the third, fourth or greater order of streams and include the larger wadable streams.

"***Non-accessed" category and assessments***

31. Comment: We supported the Agency's categorization of "evaluated data" as "not assessed". The increasing availability of monitoring data from the Agency's collection efforts has eliminated the need to use data that previously were used to make an "evaluated" assessment.

Response: The Illinois EPA thanks the American Bottoms Wastewater Plant for this comment. To clarify, in previous water quality reports, Illinois EPA classified assessments as "monitored" if they were based on site-specific monitoring data believed to accurately represent existing resource condition. They were classified as "evaluated" if they were based on less reliable information such as land use data, the location of pollution sources or older monitoring data. Based on USEPA guidance for the development of the 2006 Integrated Report, the distinction between evaluated and monitored assessments has been discontinued. Many stream assessments classified as "evaluated" in the 2004 Illinois Water Quality Report were changed to "not assessed" in the 2006 Integrated Report. All assessments based on Volunteer Lake Monitoring Program data were reclassified to "Insufficient Information" in the 2006 Report.

32. Comment: We support the change to the method of assessing support of the Primary Contact Use which requires use of all fecal coliform data, as described on p. 65 of the draft report. While previous assessments of the Primary Contact Use allowed for the elimination of fecal coliform data associated with high TSS data, the new assessment requires inclusion of all fecal coliform data. We agree that this change better reflects the letter and intent of the law and support IEPA's decision to change that method.

Response: Thank you for this comment.

Other

33. Comment: In addition to the deletion of algal growth as a cause of impairment, other non-pollutant causes were deleted from the list. Why were some causes left on the list such as alteration in stream site or littoral vegetation and others deleted?

Response: In previous 303(d) lists, the Agency did not distinguish between pollutants and non-pollutants. The current draft Integrated Report uses USEPA guidance stipulates that TMDLs may only be conducted for pollutants. Appendix B-1 and B-2 of the draft Integrated Report still lists aquatic algae and other non-pollutant causes. They are identified as causes, but no requirement for a TMDL is associated with these non-pollutant causes.

34. Comment: Because Horseshoe Lake is a valuable resource for the people of Illinois, particularly the residents of Granite City, Madison County, St. Clair County and East St. Louis, the actual uses (i.e., fishing, water-fowl hunting, boating, bird-watching, deer hunting, hiking, camping, urban fishing programs, and picnicking) should be recognized by IEPA in the 2006 Integrated Report. These statewide and local uses demonstrate the need to protect Horseshoe Lake from pollution so that these uses will be maintained. Because residents use the area for sustenance through subsistence fishing as well as recreational purposes, greater care should be taken in protecting the water quality and designated uses of Horseshoe Lake.

Response: Several of the designated uses identified in this question (e.g., fishing and boating) were specified by the Illinois Pollution Control Board when it established the water quality standards in Illinois. Those and only those designated uses may be assessed under the 2006 IR. Protection of the "fishable" use is conducted under the Illinois Fish Contaminant Monitoring Program, further discussed in Part C-1.

35. Comment: The non-point sources affecting Horseshoe Lake include stormwater runoff from Granite City, industrial facilities, and nearby agricultural fields. Urban and agricultural stormwater runoff into Horseshoe Lake contributes to the impairment of the lake for its designated uses of aesthetic quality, fish consumption, and aquatic life. In order to attain the designated uses, nutrient loading from stormwater must be regulated and reduced. A portion of the stormwater from Granite City and Nameoki Township is discharged into Horseshoe Lake. With a significant source of stormwater such as Granite City located right next to Horseshoe Lake, the IEPA should investigate this source of nutrients during the TMDL development.

Response: The 2006 IR indicates that the sources of various causes of impairment are: Crop Production (Crop Land or Dry Land), Urban Runoff/Storm Sewers, Contaminated Sediments, Industrial Point Source Discharge, and Source Unknown. This appears to adequately address the sources raised in the comment. In the course of conducting the TMDL, all sources will be reviewed and if the available data and information direct us to look at other sources or factors, we will do so. The implementation plan for the TMDL will address all such identified sources.

36. Comment: On page 112 of Appendix A, Illinois EPA has designated Horseshoe Lake as impaired for TSS and pH under the "Aquatic Life" designated use. For these impairments, the potential sources of listed impairments do not include the category "industrial point source". As a result, failure to include "industrial point source" as a potential cause of impairment for these pollutants is inaccurate and should be amended so as to reflect the Granite City Steel point source.

Response: All sources of impairment will be identified and documented in the course of developing the TMDL. Identification of sources in Appendix A will have no effect on the analysis of contaminant sources conducted during the TMDL.

37. Comment: Granite City Steel is the sole NPDES permit holder and point source discharger into Horseshoe Lake. Zinc and TSS are among the many pollutants that Granite City Steel discharges subject to its permit limitations. Therefore, because Horseshoe Lake is impaired for zinc and TSS, and Granite City Steel is a point source contributor of both pollutants, we feel it is sound judgment to implement TMDLs for both pollutants as promptly as possible.

Response: The ongoing TMDL for Horseshoe Lake was started in late 2004, before zinc and TSS were identified as causes of impairment. We are in the process of amending some of the work on this TMDL so that additional sources and contaminants can be added once the 2006 IR has been formally approved by USEPA.

38. Comment: It was the MWRGC's understanding that the Illinois EPA used water quality data that the District collected during 2003—2004, and subsequently submitted to Illinois EPA to make water quality decisions in the 2006 IR. In Table 1 (General Use Waterways) and Table 2 (Secondary Contact Waterways), water quality constituents listed in the subject report as being indicative of an impaired stream segment are compared with analytical results from the District's Ambient Water Quality Monitoring Program as well as the Illinois water quality standard for the respective constituent. All water quality constituents in Table 1 and Table 2 were found by the District to be in compliance with Illinois water quality standards, even though they were noted in the subject report as not being in compliance.

Response: On page 35 of the 2006 Integrated Report we indicate that data collected through December 2003 will be considered, and in some limited situations, we also used data from 2004. Generally the use of 2004 data was limited to public health concerns (i.e. fish consumption, public water supplies, etc.). When making use support assessments with ambient water quality monitoring network (AWQMN) data, three years of data are generally included in the analysis, as recommended by USEPA (1997). For this report cycle, AWQMN data from January 2001 through December 2003 were used. For consistency, only MWRDGC data within this same time period were used for assessment purposes. Some segments have more than one IEPA and/or MWRDGC monitoring station. When this is the case, potential causes from all stations within the segment are listed. In some instances sediment chemistry data from IEPA Intensive Basin Survey (IBS) stations were responsible for a parameter to be listed as a potential cause of impairment. Based on the above, the constituents listed in MWRDGC Tables 1 and 2 will continue to be listed as potential causes of impairment. Even if 2002 through 2004 data were used, these parameters would still be listed. Specific segments are discussed below.

IL_GL-09: Sulfate was listed as a potential cause because of a concentration of 748 mg/L in an IEPA sample from station GL-09 on 8/27/02.

IL_HCCC-02: IEPA data from 2003 indicated chloride non-compliance. However, due to possible quality control issues, chloride data from 10/1/2002 through 12/31/2003 were not used for this assessment cycle. Chloride was previously listed as a potential cause (2004) because of a concentration of 707 mg/L in January 2000. Both IEPA and MWRDGC data indicate the potential for impairment due to TDS/conductivity. This segment is an urban stream that is likely impacted by TDS and chloride due to road de-icing salt. Therefore, chloride remained as a potential cause for the 2006 report.

IL_HA-05: Silver was listed as a cause because of a highly elevated sediment concentration at IEPA station HA-05 in 2001.

IL_HAB-41: Arsenic, barium, copper, lead, nickel, silver and zinc were listed because of highly elevated concentrations in sediment samples collected by IEPA.

IL_H-01: Dissolved oxygen was listed because IEPA data indicate concentrations below 3 mg/L.

A significant mistake was noticed when reviewing MWRDGC's comment. MWRDGC data for Higgins Creek at stations 77 (Elmhurst Road) and 78 (Wille Road) were mistakenly used to assess segments IL_GOA-01 and IL_GOA-02, respectively. The correct assessments are below:

IL_GOA-01
Segment description: From confluence with Willow Creek to MWRDGC Kirie WRP.
Monitoring station: Wille Road (MWRDGC-78).
Aquatic Life Use: Nonsupport (poor).
Potential causes: TDS, fluoride, chloride, nickel, silver, zinc, nitrite + nitrate and phosphorus.

IL_GOA-02
Segment description: From MWRDGC Kirie WRP to headwaters.
Monitoring station: Elmhurst Road (MWRDGC-77).
Aquatic Life Use: Nonsupport (fair).
Potential causes: Dissolved oxygen, TDS, chloride and phosphorus.

39. Comment: The statement on page 57 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" does not explain actual biological or chemical causes of impairment. It is requested that Illinois EPA provide the definition of "true risk" in terms of a biological or chemical effect.

Response: See response to comment 14.

VOLUNTEER LAKE MONITORING PROGRAM DATA

40. Comment: What are the uses of the data collected through the VLMP? Are they used in the 303(d) listing process?

Response: At the present, VLMP data are used in some Agency programs, but they are not used in 303(d) assessments. The VLMP was started as an education program with the purpose of increasing citizen interest in the state's lake resources by involving them in lake monitoring. The program has worked very well in fulfilling that purpose.

41. Comment: Why don't data collected through the Volunteer Lake Monitoring Program meet the Agency's quality assurance/quality control requirements?

Response: The data quality requirements for 303(d) listings are different from the requirements of the Volunteer Lake Monitoring Program. VLMP volunteers are trained, but they do not meet the same quality standards as the Agency's professional staff. For example, the Illinois EPA's quality officer audits the Agency's professional biologists to make sure that they are collecting data in accordance with the Agency's sample collection protocol. The Agency does not audit the volunteers in the VLMP.

The Agency is, however, developing a three-tiered volunteer program for the VLMP. The highest tier would consist of those volunteers who have been in the program for a long time and in whom the Agency has confidence that they will correctly conduct the Secchi disk monitoring and will follow the Agency's protocol for collection and shipping of water quality samples. These volunteers would be subject to audit, and the data they collect will be eligible for use in 303(d) assessments.

FISH ADVISORIES

42. Comment: Was there a different protocol used this year for assessing the suitability of fish for consumption. If so, what are the differences?

Response: The Agency used the same protocol as was used in past assessments. The draft 2006 Integrated Report, however, describes the protocol in more detail than previous reports.

43. Comments: Is the fish advisory on the Illinois Department of Public Health (IDPH) web site used as the basis for your listing?

Response: The advisories listed on the IDPH web site are set by the Fish Contaminant Monitoring Program, which has representatives from Illinois EPA, Illinois Department of Natural Resources (IDNR), IDPH and the Illinois Department of Agriculture. Most of the fish are collected by IDNR and sent to the Illinois EPA laboratory for analysis. The Fish Contaminant Monitoring Program workgroup uses the fish tissue results to set the advisories. These advisories are part of the basis for listing, along with additional fish tissue samples analyzed for the Program.

44. Comment: What is the methodology for fish sampling? What species are chosen for sampling?

Response: Fish collection and sampling are conducted under a memorandum of understanding between the Illinois EPA, the IDNR, the Illinois Department of Agriculture and the IDPH. Because of budget constraints, sampling is limited to about 400 samples per year.

The goal of the program is to sample, on a ten-year cycle, each major river basin that supports public access. The goal for lakes and reservoirs that support public access is sampling every five to ten years unless the lake or reservoir is currently under a fish advisory. If so, then sampling is done on a one to three year schedule to determine whether there is a need to update the advisory.

The protocol specifies that four fish are sampled from bodies of water where there is no concern or where the body of water has not been sampled recently. Two of the fish are to be bottom feeders--carp is the preferred species. One of the fish should be an omnivore—that is, one that eats a little bit of everything. The preferred species in this category is channel catfish. The fourth species should be a predator (fish that eat other fish). The preferred species for that category is either largemouth or smallmouth bass, whichever is predominant in the water that is being sampled.

If the sample results from any of the four samples from a body of water exceed a fish tissue concentration established under the protocol, the Agency asks IDNR to go back the following year and collect a full sample—two carp, two catfish, two bass and an additional species of local importance. The Fish Contaminant Monitoring Program group evaluates the data from the two years, plus available historical data, and makes a decision about whether or not there should be a fish advisory placed on that body of water.

45. Comment: Two years ago, the IDPH web site said that Frank Holton State Park had a statewide fish advisory. In addition to the statewide advisory, however, the web site said that fish from the lake had tested positive for mercury. Why is Frank Holton State Park Lake no longer listed as impaired for mercury?

Response: The Agency cannot comment on what was written in the IDPH web site regarding advisories for Frank Holten State Park Lakes two years ago. However, the database used by the Fish Contaminant Monitoring Program contains two recent samples of largemouth bass from the lakes, collected in 1999, that were negative for mercury (with a detection limit of 0.1 mg/Kg). Furthermore, the listing for these lakes is based on detection of polychlorinated biphenyls (PCBs), not mercury, in recent samples. The Agency hopes this clears up the commenter's misconceptions about the listing for these lakes.

46. Comment: Based on persistent fish consumption, poverty-induced disregard of the posted warnings, and proximity to mercury emissions, we encourage IEPA to increase its fish tissue testing for mercury at Horseshoe Lake to at least once every year. In addition, we advise IEPA to recognize that each year Horseshoe Lake is stocked by the state for fishing. These newly added fish are not reflective of accurate mercury concentrations in fish tissue of existing stock. Because of the harm to human and aquatic life caused by mercury, IEPA should take extra care to sample the current fish stock, rather than specimens recently added by the state, in order to ensure accurate sampling. We also recommend that for Frank Holten State Park and all other bodies of water in the state.

Response: As in comment 45, it appears that the commenter has some misconceptions about Horseshoe Lake fish and fish advisories. The IDNR biologist assigned to the Horseshoe Lake area has informed the Agency that Horseshoe Lake has never been stocked because IDNR policy is to not stock river backwater lakes since the fish will escape during flood events. Also, the existing fish advisory for this lake is based on PCBs, not mercury, and two samples of largemouth bass and one sample of bluegill were tested for mercury in 1999 and found to be non-detect. Recently stocked fish are typically too small to be considered for fish tissue analysis—their size would prevent them from being consumed by humans and therefore inappropriate targets for a determination of tissue contamination. The Agency hopes this clears up the commenter's misconceptions about this lake."

47. Comment: How is an advisory lifted from a body of water?

Response: To rescind an advisory, the Fish Contaminant Monitoring Program, under most circumstances, requires two consecutive sampling periods when the fish tissue concentration established under the protocol for that contaminant is not exceeded.

DETERMINATION OF SOURCES OF IMPAIRMENT

48. Comment: I understand that the Agency has a list of categories of facilities/activities that may cause a certain type of pollution. Is it correct to say that if a waterbody is impaired by one of these pollutants, and a source from this list falls into the category for

that pollutant, the Agency will list that source as the cause of impairment of the waterbody without any additional information?

Response: Yes, if, in the Agency's best professional judgment, that source is the cause of impairment. Sometimes the Agency does have specific knowledge, however, that a facility is not meeting its discharge limits for a specific pollutant so the correlation is more direct. Agriculture is probably the number one activity in this state that is identified as a cause for impairment, because 80 percent of our waters are surrounded by agriculture and the pollutants in question are related to agricultural activities.

49. Comment: Can listing a facility as a potential source of impairment for a body of water (before a TMDL is conducted) be used in a permit hearing for that facility?

Response: It is doubtful that the general identification of a source category (e.g., municipal point source discharges) would have any particular weight in a permit hearing. Since the permit application would have to have been reviewed by the Agency prior to the hearing, the impairment and antidegradation issues would have been fully reviewed and published for the public. If an issue were to arise in regard to the discharge from that source, the Agency would need to resolve how the discharge could continue or, potentially, increase without violating the applicable water quality standards.

50. Comment: When impairment is detected and the source is listed as "unknown", does the Agency undertake an investigation to determine the source?

Response: An investigation to determine the source of impairment is not undertaken until a TMDL is conducted. Whether or not the sources of an impairment are identified has no bearing on the prioritization for TMDL development. If a TMDL is undetaken for a waterbody, one of the goals of a TMDL is to identify the source(s) of impairment.

51. Comment: Does the Agency take information from the public about possible sources of impairment?

Response: There are a few ways that the Agency receives information about possible sources. One is through this hearing process. Another is through the normal citizen pollution complaint process. Complaints can be submitted in writing through regular mail or the Agency's website at http://www.epa.state.il.us/pollution-complaint. For the most part we rely on our knowledge of the watershed and a long staff history of dealing with wastewater issues, watershed planning, permitting and enforcement/compliance to tell us of possible sources of impairment in any given area.

52. Comment: If water becomes impaired during the first year of a source's NPDES permit, is the permit reopened or does the Agency wait until the permit has expired to reevaluate the source's discharge?

Response: Although it would be technically difficult for us to detect an impairment in such a short time frame (a great deal of our surface water information comes to us by way of the Intensive Basin Survey Program that operates on a 5-year schedule, and the 303(d) List is published only once every two years—this one base on data from three years ago), the NPDES permit can be reopened.

53. Comment: Who makes the decision about reopening the permit? Does the public have a role in the decision?

Response: The Agency makes the decision. Theoretically, the public could give the Agency information that might eventually lead to the reopening of a permit, but this has rarely happened

54. Comment: The NPDES permit for Granite City Steel allows the discharge of ammonia, cyanide, iron, and oil and grease into Horseshoe Lake. These compounds should therefore be investigated to see if their concentrations violate water quality standards.

Response: Based on biological and chemical assessments conducted for the lake, the Illinois EPA has determined that the lake is impaired for phosphorus (Total) and total suspended solids (TSS) for aesthetic quality; heptachlor, pH , phosphorus (Total), TSS, and zinc for aquatic life; and PCBs for fish consumption. Our monitoring and assessments of this lake and other waters routinely involves the sampling for many of the compounds you cited (above) as well and many others. The data available to us do not indicate impairment due to ammonia, cyanide, iron, and oil and grease.

PRIORITIZATION FOR TMDLS

55. Comment: How does the Agency determine the priority list for conducting TMDLs?

Response: The Agency determines priorities for conducting a TMDL by first considering the use designations, establishing a High (public and food processing water supply use), Medium (aquatic life use, fish consumption use and primary contact) and Low Priority (aesthetic use) for specific uses. Within each Priority group, we next consider the overall severity of pollution as determined by the number of causes of impairment

56. Comment: If a waterbody is listed as a priority for TMDL and has multiple causes for impairment, must a TMDL be conducted for each pollutant listed?

Response: Yes.

57. Comment: The commenter agrees that prioritization for TMDLs should be based on the Agency's best professional judgment about the potential for improvement in a waterbody and on the extent of public support. However, would the Agency give an example of how these criteria are used and whether or not they are important criteria?

Response: Neither the criterion of "professional judgment" nor the criterion of "public support" drives the prioritization process. The Agency has not had an opportunity to use these criteria but wants to retain them in order to judge between equal claims. For example, if two watersheds were identified as needing TMDLs, but one had no public support and the other had a watershed group already in place doing work, the Agency would probably choose the publicly supported watershed if only one project could be funded.

58. Comment: If a facility/activity is listed as a potential source of impairment, does this listing have implications for scheduling or prioritizing for TMDLs?

Response: No. It has no importance in setting the priorities for TMDLs and no importance in establishing the level of impairment. That information is not used when a TMDL is conducted because the Agency uses up-to-date information in that process—information provided by Agency staff, the watershed group or one of the Agency's contractors conducting the TMDL assessment.

59. Comment: Does the Agency's interim environmental justice policy affect prioritization for TMDLs?

Response: The Agency's policy on environmental justice does not affect the prioritization of impaired waters. Environmental justice, however, may be considered when the Agency is developing an implementation plan, the last phase of the TMDL.

60. Comment: It seems as if environmental justice issues should bear on prioritization, because lower income people may be using the fish from affected water as a primary protein source. This use should move it up in the list of priorities.

Response: That is an interesting comment, and the Agency will consider it. As stated above, fish consumption is assigned a Medium Priority, although some waters with fish consumption advisories may be placed in the High Priority if they are also used for public and food processing water supplies.

61. Comment: The Agency should conduct a survey of people who fish in Horseshoe Lake.

Response: We are unclear how such information could be timely gathered and used in the Integrated Report, or if in fact it is actually needed. Horseshoe Lake is impaired and the TMDL is underway, albeit not for the PCBs. Elsewhere in response to these comments we have explained why we elected not to conduct a PCB TMDL.

62. Comment: The burdens of the continued impairment of Horseshoe Lake, including the pollution generated by Granite City Steel, fall disproportionately on a disadvantaged group of local citizens. Many of the residents of Granite City and other surrounding communities are impoverished members of minority groups. Furthermore, many of these local residents use Horseshoe Lake as a subsistence food supply. Therefore, the development of the TMDLs for Horseshoe Lake should be given high priority to ensure the safety of these economically disadvantaged residents. Such prioritization is consistent with the Illinois EPA's interim environmental justice policy.

Response: The Illinois Fish Contaminant Monitoring Program (FCMP) evaluation resulted in the identification of PCBs as the cause of fish tissue contamination for Horseshoe Lake. The FCMP accounts for "subsistence" fishing by including the "Unlimited" category, which assumes 225 meals of sport-caught fish are eaten per year. This meal frequency was chosen by the Great Lakes Fish Advisory Task Force because it roughly corresponds to the 90th percentile of fish consumption rates by recreational anglers from studies reported in the literature. This consumption rate may not equate to a true subsistence, versus recreational, angler who might consume significantly more than 225 meals per year. The Great Lakes Fish Advisory Task Force reasoned that a general advisory for sport anglers should not attempt to address true subsistence angling since advice for such populations should more appropriately be conveyed as part of a targeted message from a public health agency. Unfortunately, DNR does not include questions regarding consumption of sport fish in their angler creel surveys, so the existence of true subsistence anglers at Horseshoe Lake cannot be quantified at this time.

63. Comment: Table C-29 should include information regarding the use of the prioritization process in selecting these watersheds. The criteria identified on page 85 of the draft document for giving a higher priority to a particular waterbody for TMDL development are potentially useful. We agree that waters that have higher potential for

improvement and/or have higher degree of public involvement are appropriate for early TMDL development. Please indicate which waterbodies in Table C-29 these factors played a role in their selection for TMDL development within the next two years.

Response: Unfortunately, neither of these factors has been useful to date. We believe the potential still exists for their use and for the need to separate equally ranked waters, and we will therefore retain them for that contingency.

64. Comment: Priorities should not be lowered for pollutants for which numeric criteria do not exist. We understand that it is easier to start developing TMDLs for those pollutants for which there are numeric criteria. However, to the extent that some of numeric criteria are affected by parameters for which numeric criteria do not exist at this time, it is inappropriate to avoid developing a TMDL for them. Specifically, nutrient TMDLs are necessary to address numeric water quality standards for dissolved oxygen, and therefore, nutrient TMDLs should not be given a lower priority.

Response: All causes of impairment are counted when determining the rank of each waterbody regardless of whether the cause is based on a narrative or numeric standard. While we do not conduct TMDLs for nonnumeric-based impairments, in many instances the outcome of the TMDL, through the implementation plan, can capture these causes in much the same manner that numeric causes can be addressed. The example given above, of the relationship between dissolved oxygen and nutrients, represents one case in which this "piggy-backing" can occur.

65. Comment: The Agency should clarify the assignment of lower priority based on "natural background levels" and "legacy issues." While it is justified to assign a lower priority to waters for which pollutant loadings are exclusively from background or legacy sources, those waters that also have regulated point source contributions to the pollutant loads should not receive a lower priority. These sections should be revised to indicate that such waters would receive a lower priority only if the sources of pollutants are exclusively natural background levels and/or legacy issues.

Response: In assigning a lower priority to waters affected by legacy or natural background conditions, we have not established a link from the causes of impairment to existing sources. This would require an extensive effort and research that is typically conducted once a TMDL has begun. To the extent that this occurs, future loadings from point sources to waters affected by legacy and natural background conditions will continue to be protected by permitting and compliance programs until a TMDL can be done.

DELISTING AN IMPAIRMENT OR WATERBODY

66. Comment: The report indicates that stream segments may be removed from the impairment list based on new data. How much new data must the Agency have to remove a segment from the list?

Response: The new data would have to indicate that the segment is longer impaired by any pollutant. The Agency uses the same amount and type of data to remove an impairment listing as it does to make the initial listing.

67. Comment: Is one season's worth of data or a handful of samples from a basin survey assessment sufficient to delist an impairment?

Response: We believe they are, keeping in mind that biological indicators are needed for an intensive basin survey and that these indicators are a more accurate and reliable means of determining stream health than intermittent water chemistry samples.

68. Comment: How is modeling used to determine whether an impairment for a waterbody should be added or removed from the 303(d) List? Is modeling used with biological and chemical water quality data?

Response: The Agency does not use modeling, including probabilistic modeling, to make determinations of which impairment should be added or removed from the list. Probabilistic modeling involves applying sample results from one part of the state to a different part of the state, from one waterbody to another.

69. Comment: Does a TMDL have to be approved for each pollutant listed before that waterbody can be removed from the list of impaired waters?

Response: Yes, the TMDL has to be approved for each pollutant before a segment can be removed from Category 5.

70. Comment: The table of delisted waters should include more specific information regarding waters delisted due to "New Assessment," and this information should be available for public comment prior to finalizing the report. Table C-30 includes many pollutant/water segment combinations for which the reason for delisting is stated as "New Assessment." In post-hearing communications, IEPA staff indicated that these new assessments do not refer to an assessment of any new data, but rather refer to new assessments of old data. The changes to the assessment methods that led to these removals are not clear from the draft report. Without further explanation, it is not clear how the

removal of these impairments complies with USEPA's requirements for delisting. Because these are significant modifications to the list, we feel that the new methods by which these impairment causes were removed should be clarified and made available for public comment in order to satisfy requirements for public participation.

Response: Table C-30 indicates segments in which data were re-evaluated using the current methodology if those original assessments were based on an "evaluated" assessment. Those cases were identified as "New assessments". "New assessment data", also in Table C-30, indicates those segments in which new data (e.g., data from 2003) were used in an assessment. We will clarify this distinction in the notes for the table.

71. Comment: We object to removal of phenol as a cause of impairment without clear demonstration that water quality standards are being met. It appears that phenol has been totally removed from the list. This cause should not be removed without information that clearly indicates that these waters are not impaired due to phenol.

Response: The aquatic life use criterion for phenol is 0.1 mg/L, used in this case to determine if phenol is present in concentrations that will cause an adverse taste in fish tissue when consumed by humans. Unlike other contaminants, phenol causes a problem (adverse taste) before it reaches a level toxic to aquatic life. As indicated on page 36 of the Integrated Report, an Illinois EPA initiated review of surface-water results analyzed by Illinois EPA laboratories showed that some data failed to meet quality control criteria or failed to meet data quality objectives. For these analytes, 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. This includes phenol samples collected from 01/01/1999 through 12/31/2003.

72. Comment: We object to removal of nitrate as a cause of impairment without demonstration that standards are being met. Several waters for which nitrate was delisted now have no information regarding public water supply use in Appendix B. Waters for which nitrate was previously listed as a cause of impairment were presumably previously assessed for support of the Public and Food Processing Water Supply use, given that this is the only use that currently has a nitrate criterion. Table C-30 indicates that nitrate was removed from most of the waters for which it was identified as a cause of impairment. Appendix B shows no information regarding the assessment of the Public and Food Processing Water Supply use for those waters for which nitrate was delisted. It does not show these waters as fully supporting, not supporting, not assessed or insufficient information regarding this use. Please explain the omission of this use for these waters that were previously assessed as not supporting the use.

Response: In previous reports nitrogen was mistakenly identified as nitrates for stream assessments. Our intent here is to correct that mistaken listing of the incorrect cause of

impairment. Several lakes have been delisted because they are no longer have a public water supply use, and therefore the nitrate standard does not apply.

73. Comment: We object to the removal of fecal coliform as a cause of impairment without demonstration that the waterbody is meeting applicable standards. For almost all of the waterbodies in Appendix B, the Primary Contact use is identified in the table as fully supporting (F), not supporting(N), or not assessed(X). For most, if not all, of the waters for which fecal coliform was removed as a cause of impairment, there is no information regarding assessment of the Primary Contact use in Appendix B; there is neither an F, N, nor X to indicate the attainment or assessment of this use. In a telephone conversation, IEPA staff indicated that this omission is due to disinfection exemptions that were granted to facilities whose discharges affect these waterbodies. However, it is not clear that Use Attainability Analyses have been conducted for these waters. We object to removal of uses that have not gone through the Use Attainability Analyses procedures of 40 CFR 131.10. Further, Clean Water Act Section 305(b)(1)(B) states that States shall prepare a report that includes an analysis of the extent to which navigable waters, among meeting other uses, allow recreational activities in and on the water. Therefore, even if UAAs have been conducted, the assessment and reporting of this use attainment is nonetheless required by federal law. If there is information available to indicate that these waters do not meet the use, it must be included in this consolidated report.

Response: The Agency maintains that it has followed properly adopted water quality standards that allow the Agency, when requested, to issue a disinfection exemption for waters that are not subject to primary contact. In those cases the fecal coliform standard does not apply. In these cases an analysis of the waters and the use is made, in accordance with the disinfection standard under Subtitle C, and while the analysis has many of the same elements, it is not a UAA.

74. Comment: Some pollutants were removed from the list although Appendix B of the report still suggests that the waterbody is impaired due to the delisted pollutant. For several waters, fluoride and/or ammonia were removed from the 303(d) list although these pollutants are still identified as potential causes of impairment in Appendix B. These waters include, but are not limited to, segments DT-01, HB-42, HBD-02, HBD-04, FLE-02, FLEA-C1, FLGB-C1, and N582. These pollutants certainly should not be removed from the 303(d) list unless available data demonstrates that the pollutant is not contributing to a violation of water quality standards including designated uses.

Response: Thank you for the comment. We have corrected this mistake.

75. Comment: Several segments for which delistings are indicated in Table C-30 have been removed from Appendix B altogether. These waters have no information at all

regarding use or standards attainment and include, but are not limited to E-11, E-13, E-27, E-28, E-30, E-32, and EO-12. These segments should not be removed from the list unless data indicates that they are meeting all water quality standards.

Response: Segments were given new identification numbers but were not delisted in these cases.

76. Comment: Previously listed causes that referred to general categories of pollutants should not be removed unless the specific pollutant of concern within the category is identified. Table C-30 of the Integrated Report indicates that several impairment causes have been removed because they are general categories of pollutants, rather than specific pollutants. These causes include "Unspecified Metal," "Unspecified Nutrients," and "Salinity/TDS/Chlorides." At the public hearing held regarding the draft report, when asked whether in each of these cases, the specific pollutant within the category was identified and listed, IEPA indicated the specific pollutant was identified if there were data available to properly identify the specific pollutant. This should be clarified by identifying in Table C-30 the specific pollutant within the general category that is maintained on the list. If the specific pollutant cannot be identified from the existing data, additional monitoring should be conducted to identify that pollutant prior to removing the general category name from the list.

Response: In most of certain cases, metals and nutrients were recorded by the Agency several years ago in this way. Over the last few cycle of the 303(d) List we have attempted to update this information and specify what the actual metal or nutrient was. We will revise Table C-30 to reflect this updated information.

SCHOENBERGER CREEK

77. Comment: Schoenberger Creek, or the channelized part of that creek, which is called Lansdowne Ditch and empties into the Cahokia Canal, is extremely red. I see that the Agency had public noticed a draft NPDES permit for a nearby facility and that the comment period ended last week. That facility is a source, but that body of water is not listed as impaired. Can the Agency revisit the NPDES permit?

Response: The Illinois Pollution Control Board issued a site-specific water quality standard for Schoenberger Creek, effective in 1983, which relates to the red color noted in that waterbody. The American Bottoms, where Schoenberger Creek is located, has a high water table and the groundwater has a high iron content. When a facility brings the groundwater to the surface for use or removal, the iron is oxidized, the water turns red from the iron particles and gains suspended solids particles where before there were none. Since this iron is naturally occurring, the Pollution Control Board has granted several dischargers of the groundwater relief from iron and total suspended solids standards. The site-specific standards set by the Board are the

applicable standards under which Schoenberger Creek is evaluated for attainment of standards and thus 303(d) listing. The red color of the stream in these particular instances is not a condition that may be considered an impairment. The NPDES permit properly takes into account the relief granted by the Board and therefore no cause for review of the permit exists.

78. Comment: Is Schoenberger Creek the only body of water in the American Bottoms with an adjusted standard?

Response: There are two other than Schoenberger Creek. The discharges are associated with pump stations for the Illinois Department of Transportation. Others who discharge this iron-rich groundwater to surface water without adjusted standards from the Illinois Pollution Control Board probably would be in violation of state and federal law.

HAMPSHIRE CREEK

79. Comment: Hampshire Creek (IL_PQFD-H-C1) should not have been listed as impaired in 2004, and should be deleted from the 2006 listing, because the Village of Hampshire's first project for expansion (a capacity increase from 0.45 MGD to 0.75 MGD) of its WWTF was reasonably expected to improve the water quality in the creek within a reasonable time frame.

Response: Given the very poor conditions found in Hampshire Creek downstream of the Hampshire WWTF in September 2002, and the continued very poor effluent quality through October 2003, it could reasonably be concluded that Hampshire Creek would not attain full aquatic life use and compliance with applicable water quality standards within a reasonable time frame. Data from 2004 and 2005 submitted by Hey and Associates, on behalf of the Village of Hampshire, clearly indicate continued instream impairment due to the WWTF discharge. Therefore, it was completely justifiable to include Hampshire Creek (segment IL_PQFD-H-C1) on the 2004 303(d) List and to continue to include this segment on the 2006 303(d) List.

80. Comment: Hampshire Creek now supports the designated use of the waterbody for aquatic life, since the plant expansion came on-line in June 2004. In 2004 and 2005 the Village of Hampshire investigated the current conditions of the creek. The data from this study have been submitted to the Illinois EPA for review. These data show that the IBI and the MBI have improved in relation to the 2002 conditions and now attains pre-listing levels, substantially complies with applicable water quality standards, is consistent with streams of its type in the region and supports aquatic life.

Response: IEPA reviewed the data submitted by the Village of Hampshire. Although there are some questions and concerns regarding this study, the data do not support the claims that the

stream is attaining full aquatic life use and is substantially in compliance with applicable water quality standards. There appears to be some improvement compared to the 2002 data but instream conditions downstream of the Hampshire discharge still do not attain the level of quality necessary to be assessed as fully meeting aquatic life use (see Figure C-2 and Tables C-1 through C-3 of the Integrated Report). It should be noted that fish samples were not collected in Hampshire Creek prior to 2004; so the above statement by the Village, indicating that fish IBI scores have improved in relation to 2002 conditions and are now attaining pre-listing levels, is not accurate. MBI values appeared to have improved since 2002 but they still have not achieved the values found upstream of the WWTF discharge in1991 and 2002. In addition, water quality results from the village's study indicate that concentrations of nickel and total dissolved solids in Hampshire Creek, downstream of the Hampshire WWTF, are exceeding General Use water quality standards. Based on the water quality data submitted by Hampshire in 2006 collected in 2004--2006 and on data collected by the Illinois EPA in 2002, we believe this stream segment is impaired for nickel and total dissolved solids, and remains impaired for phosphorus (total). These data also indicate that the stream is no longer impaired for ammonia (total) and dissolved oxygen. We propose to revise the listing for this segment of Hampshire Creek accordingly.

81. Comment: Hampshire Creek should not be listed as impaired on the 2006 List because it is reasonably expected to meet all water quality standards within a reasonable time frame as a result of the Village of Hampshire's recent WWTF expansion to 0.75 MGD.

Response: Based on 2005 data submitted by the Village of Hampshire, Hampshire Creek downstream of the Hampshire WWTF discharge is still not in compliance with applicable water quality standards and is also not attaining full aquatic life use (see Figure C-2 and Tables C-1 through C-3 of the Integrated Report). Nickel and total dissolved solids concentrations in Hampshire Creek, downstream of the WWTF discharge, are exceeding General Use Standards. Given the recent history of the Hampshire WWTF and it's impact on Hampshire Creek, it cannot be reasonably expected that Hampshire Creek will meet all applicable water quality standards and attain full aquatic life use within a reasonable time frame. Therefore, Hampshire Creek (segment IL_PQFD-H-C1) will remain on the 2006 303(d) List.

82. Comment: Hampshire Creek should not be listed as impaired on the 2006 List because it is reasonably expected to meet all water quality standards within a reasonable time frame as a result of the Village of Hampshire's recently approved WWTF expansion to 1.5 MGD. The Village expects the to be awarded in March 2006, and the added treatment will have the capability of treating for phosphorus.

Response: See responses 79 through 81.

OTHER

83. Comment: Does the Agency plan to quickly move forward with conducting a TMDL for Horseshoe Lake, or is the impairment so great that it is too difficult to correct or clean up? Horseshoe Lake is also listed as impaired for phosphorus, total suspended solids, heptachlor, pH, zinc and polychlorinated biphenyls (PCBs). Because of its local and ecological significance, efforts should be made to further protect it and improve Horseshoe Lake's water quality, with an overall goal of returning the lake to compliance with water quality standards and attainment of its designated uses. We strongly encourage the Illinois EPA to promptly develop TMDLs to address these impairments.

Response: Illinois EPA began a TMDL on Horseshoe Lake in late 2004 and will be completing the Stage 1 report for this TMDL in the next few months. The Stage 1 report will be made available to the public and a public meeting will be held in the Horseshoe Lake region at that time. The TMDL is for phosphorus and pH, the only current impairments for which there are numeric water quality standards.

84. Comment: How often is an impairment assessment conducted for a specific body of water?

Response: Please see Part C of the Integrated Report (pages 29-145) for detailed information on the various monitoring programs and how frequently sampling is conducted under each program.

85. Comment: Is the water level of a stream segment considered when evaluating sample results? If the water level is high, contaminants may be more diluted and when the water level is low, contaminant levels may be concentrated.

Response: The Agency tries to collect biological information from streams during normal flow periods. Because of resource limitations, it takes five years to sample all the streams in Illinois under the Intensive Basin Monitoring Program. Flow rate of the stream is noted at the time of sample collection, but the flow rate is not often used in making an assessment. Water quality samples under the Ambient Water Quality Monitoring Program are collected nine times a years. Lake monitoring samples are collected five times per year.

86. Comment: The Illinois EPA staff are complimented for the report. It is readable and clear.

Response: Thank you.

87. Comment. What are mixing zones and are groundwater management zones included in the purview of this hearing?

Response: The concepts of "mixing zone" and "groundwater management zone" are not within the purview of this hearing. The commenter was referred to the appropriate Illinois EPA staff to explain these concepts at the close of the hearing.

88. Comment: Additional pollutants should be monitored and assessed to ensure that they do not cause violations of the narrative criterion requiring that toxins not be present in toxic amounts. Specifically, we are concerned about (2,4-dichlorophenoxy) acetic acid, commonly known as 2,4-D, and N-(phosphonomethyl) glycine, commonly known as glyphosate. Because glyphosate is the most commonly used herbicide in the state of Illinois, it may be entering surface waters at significant concentrations. 2,4-D is also widely used in the state, and recent studies have shown that this compound has negative impacts on aquatic life. Both of these compounds should be monitored in Illinois waters to ensure that they are not contributing to narrative standards violations or causing an impairment of any designated use.

Response: 2,4-D is currently sampled as part of our Pesticide Monitoring Network. Glyphosate is not currently part of that program. We are reviewing this monitoring program to see if it adequately focuses on pesticides of concern.

89. Comment: A separate table of additions to the 303(d) List would be helpful. The tables that identify segments that have been removed from the list is helpful in drawing attention to the waters that have shown improvements in water quality. Similarly, a table that shows additions to the list would be helpful to more clearly identify waters that are showing degrading water quality and waters that have been recently discovered to have lower water quality. Please include such a summary of changes to the list in a separate table.

Response: Thank you for your comment. We will attempt to complete these tables and add them to the Report.

90. Comment: The bottom half of the table on page 3 (Percent of Illinois Lakes Assessed as "Good", "Fair" and "Poor" in 2006) is a little unclear. Please clarify whether the values refer to the percentage of lake acres or percentage of lake numbers that fall into each category of use support.

Response: The table headings associated with the bottom half of the table "Percent of Illinois Lakes Assessed as 'Good', 'Fair' and 'Poor' in 2006" are inaccurate. Numbers actually indicate the percent of lake numbers (not acres) assessed for each use support category. This error will be corrected in the final document.

91. Comment: The TMDL development schedule is too ambitious given the resources allocated to this program. While we would appreciate rapid development of defensible and protective TMDLs with useful implementation plans, the history of the program suggests that an attempt to develop TMDLs at the rate suggested in Table C-28 of the document with the resources provided will only result in inadequate TMDLs. We would prefer to see fewer defensible, implementable TMDLs than hundreds of TMDLs that have no effect on the health of our waters.

Response: We agree that in an ideal situation we would prefer to conduct fewer and better TMDLs. However, federal regulations dictate that we produce a given number of TMDLs annually.

92. Comment: Stage 2 of the TMDL development process should be clarified. We continue to support the inclusion of a data collection stage into the TMDL development process. However, if Stage 1 demonstrates that additional data are necessary for a useful TMDL, the data collection stage should not be optional. If resources do not allow for collection of necessary data, the development process should not proceed to Stage 3 until such resources are made available to collect the necessary data. Therefore, instead of indicating that this stage is optional, Stage 2 should be qualified with the phrase "as necessary."

Response: This comment captures the intent of Stage 2. The description of this stage as "optional" may give the public the impression that we exercise unnecessary discretion and move from Stage 1 to Stage 3 with little consideration of the outcome. This is certainly not the case—we have considered public comments in Stage 1 prior to making the decision to move into Stage 2 or 3. In most TMDLs so far the amount of data available for modeling and decision making is clearly presented and the general approach we have taken, with the advice of the TMDL Science Committee, to use simple water quality models resulted in the need for a moderate but not extensive amount of data, in keeping with the existing sampling programs.

Glossary

Agency	-	Illinois Environmental Protection Agency
BOW	-	Bureau of Water in the IEPA
CFR	-	Code of Federal Regulations (U. S. EPA)
Illinois EPA	-	Illinois Environmental Protection Agency
ILCS	-	Illinois Compiled Statutes
Ill. Adm. Code	-	Illinois Administrative Code (IAC)
Public Hearing Record	-	Period of time before, and after the public hearing for collection of written testimony including the hearing transcript.
Responsiveness Summary	-	A document prepared by the IEPA that responds to relevant comments, questions and issues received during the public hearing record.
TMDL	-	Total Maximum Daily Load
303(d)	-	Section of federal Clean Water Act

Distribution of Responsiveness Summary

Copies of this responsiveness summary were mailed toall who registered at the hearing, to all who sent in written comments, and to anyone who requested a copy. Additional copies of this responsiveness summary are available from Shirley Durr, IEPA, Watershed Section, e-mail Shirley.Durr@epa.state.il.us , phone 217-782-3362.

Bureau of Water Staff Who Can Answer Your Questions

Questions Concerning the 2006 Integrated Report…..Bruce Yurdin……..217-782-3362
Legal procedures……..…....Sanjay Sofat.....……..217-782-5544
Hearing of January 25, 2006…….Scott Ristau…….271-782-3362

The public hearing notice, the hearing transcript and this responsiveness summary are available on the Illinois web site: www.epa.state.il.us/water/tmdl/303d-list.html

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