

**PUBLIC PARTICIPATION RESPONSIVENESS SUMMARY
FOR IOWA'S 2008
SECTION 303(d) LIST OF IMPAIRED WATERS**

**IOWA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL SERVICES DIVISION
GEOLOGICAL & WATER SURVEY
WATERSHED MONITORING & ASSESSMENT SECTION**

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INTRODUCTION:

The following constitutes a summary of the comments received in response to the draft 2008 Section 303(d) list of impaired waters as developed by the Iowa Department of Natural Resources (IDNR). Notice of availability of the draft 2008 list was published on December 9, 2008, in the *Des Moines Register*. In addition, notice of the availability of the list was sent to interest groups and a network of statewide news organizations in the December 11, 2008 edition of IDNR's "EcoNews Wire" (<http://www.iowadnr.gov/news/eco/08dec11eco.pdf>). Public comments were accepted from December 10 through February 5, 2009.

Comments were submitted to IDNR by four organizations (Appendix 1). This responsiveness summary provides a discussion of the issues raised by the comments received and how the comments were incorporated into the development of IDNR's final 2008 list. IDNR's responses to the comments received are organized by commenter.

As distributed for public comment, IDNR's draft 2008 Section 303(d) list included 445 waterbodies. None of the commenters proposed the addition of waterbodies to, or the removal of specific waterbodies from, Iowa's draft 2008 Section 303(d) list. Due to continued internal (IDNR) review of Iowa's draft 2008 list, thirteen waterbodies were removed, and seven waterbodies were added, to Iowa's final 2008 list. Given these changes to IDNR's draft list, IDNR's final 2008 list of impaired waters (Integrated Report Category 5) includes a total of 439 waterbodies.

RESPONSES TO COMMENTS RECEIVED:

COMMENTS 1: IOWA FARM BUREAU FEDERATION:

The Iowa Farm Bureau Federation (IFBF) provided comments on four aspects of IDNR's draft 2008 list of impaired waters: (1) IDNR's assessment and listing methodology, (2) IDNR compliance with Iowa's credible data law, (3) the credible data law requirement for separate and distinct Section 303(d) and 305(b) reports, and (4) IDNR's use of the trophic state index. Iowa Farm Bureau Federation's comments are either quoted directly (in italics) or are paraphrased; IDNR's responses follow the IFBF comments.

IFBF Specific Methodology Comments

IFBF Comment 1 on IDNR's Section 303(d) listing methodology: Sources of data used for assessments and listings. IFBF acknowledges that IDNR has made progress in terms of data sharing and transparency in recent years. To improve this sharing and transparency, IFBF requests that (1) the "data source" column be added to the 2008 Section 303(d) list (as was done for the 2006 list) and (2) electronic links be provided to entries on the department's web site to the respective data reports, studies, and approved quality assurance action plans for qualified volunteers, so that citizens may read the supporting information.

IDNR Response: IDNR will add a "data source" column to Category 5 (=impaired waters) of Iowa's 2008 Integrated Report. Providing electronic links to all individual data reports, studies, and approved quality assurance plans for over 450 impaired waters on Iowa's 2008 list, however, is impractical. That is, a number of separate links would need to be provided for each impaired waters listing. Also, some studies and supporting information (quality assurance plans), and even some water quality data, are not available on-line. To improve assessment transparency, however, an electronic link will be provided from each Category 5 (impaired) water to the appropriate portion of Iowa DNR's Section 305(b) assessment database, ADBNet (<http://programs.iowadnr.gov/adbnnet/index.aspx>). This database contains detailed information for each impairment on data sources, years of data used, and water quality studies used to develop water quality assessments for the 2008 listing cycle. Iowa DNR appreciates IFBF's comment and will attempt to include electronic links as appropriate in future water quality assessments available in ADBNet.

IFBF Comment 2 on IDNR's Section 303(d) listing methodology: Difficulty of finding the Section 305(b) report. IFBF notes that the 2008 305 (b) report is very difficult, if not impossible, to find and that the identification and access to this information--which serves as the basis for the Section 303(d) list--needs to be better identified and more accessible.

IDNR Response: In supporting information at the IDNR impaired waters web site (<http://wqm.igsb.uiowa.edu/wqa/303d.html>), IDNR will emphasize that the water quality assessments in the ADBNet database

(<http://programs.iowadnr.gov/adbnnet/index.aspx>) represent Iowa's Section 305(b) report. Electronic links to the database will be provided at several locations at the Iowa DNR's impaired water website.

IFBF Comment 3 on IDNR's Section 303(d) listing methodology: IDNR needs to the improve utility of assessments and listings for end-users, including IDNR staff that prepare total maximum daily loads (TMDLs). IFBF recommends that IDNR ensure that the Section 303 (d) list and the information contained in the 305(b) assessments are useful to end-users in IDNR. For example, IFBF suggests inclusion of additional information that would facilitate effective and efficient TMDL prioritization; such additional information might include the listing of waters by agency-defined watershed size and potential pollutant source. IFBF feels that organizing the listed waters in this way *may make it easier to identify logical combinations of segments and impairments for smaller watersheds.*

IDNR Response: While the IFBF suggestions regarding end users are appreciated and relevant, the ability of IDNR to provide much of this information is limited. For example, while watershed size may have relevance for some pollutants and impairments (for example, nitrate), this piece of information may have no relevance—and would thus be misleading—for other pollutants (for example, mercury). In addition, watershed size varies for each listed river/stream segment in the assessment database (<http://programs.iowadnr.gov/adbnnet/index.aspx>). Also, as noted in IDNR's assessment and listing methodology, identifying sources of the pollutants identified as causing impairments is often problematic. Grouping impairments based on poorly-understood pollutant sources may be counterproductive for purposes of TMDL prioritization or TMDL development. For example, sources of nitrate can include natural bacterial breakdown of organic matter, agricultural fertilizers, and even rainfall. Sources of bacteria are many and varied (e.g., humans, livestock, and wildlife (avian and mammalian)). While IDNR's biological assessment protocol can accurately identify a biological impairment, no such field protocol exists for identifying the cause or source of the biological impairment. Thus, although educated guesses on sources of impairment can be made, IDNR feels that identification of pollutant sources (1) is too critical to be left to educated guesses and (2) is best accomplished through the TMDL process where more time and resources are available for source identification. Iowa DNR has attempted to provide as much information for end users as possible in the Section 303(d) list at the IDNR web site and in the assessment database, ADBNet (<http://programs.iowadnr.gov/adbnnet/index.aspx>). IDNR would like to remind IFBF that there is no EPA requirement to provide assessment narratives for each waterbody as has been done by IDNR for assessment/listing cycles since 1994. The sole purpose of developing this narrative, and for including considerable detail in this narrative, was the information needs of the end users, including IDNR staff that develop lists of impaired waters, staff that develop TMDLs, staff from other natural resource agencies involved with water quality projects (e.g., NRCS), and citizens (including students) interested in water quality information for specific waterbodies. As can be demonstrated by a comparison of assessment narratives over the successive biennial listing cycles, the level of assessment detail for each

assessed waterbody—and hopefully the utility of the information for the end user—has increased over time. IDNR will continue its attempts to improve the utility of Section 305(b) assessments to all end users.

IFBF Comment 4 on IDNR's Section 303(d) listing methodology: Atrazine impairment at West Lake Osceola, Clarke County. Referring to a prior conversation with IDNR staff, IFBF has several questions related to the 2008 Section 303(d) listing of West Lake Osceola for atrazine: (1) Are there lakes/streams/rivers on the draft 2008 impaired list that need to be on the waterbodies for further review list (i.e., list of waters in need of further investigation [WINOFI list])? (2) Based on the IDNR hypothesis that the new atrazine impairment at West Lake Osceola was possibly due to treatment reasons, why is this hypothesis not mentioned in the "Update Comments" section of the draft 2008 impaired waters list? (3) If IDNR staff believe that treatment-related issues are responsible for the atrazine impairment at West Lake, shouldn't IDNR evaluate the situation more closely before this lake is placed on a list requiring development of a TMDL?

IDNR Responses:

Response to Question 1 regarding the need to move lakes/streams/rivers on Iowa's draft 2008 impaired waters list to the list of waters in need of further investigation: In order to comply with Iowa's credible data law, IDNR makes every effort to ensure that all waters on Iowa's draft 2008 Section 303(d) list have sufficient credible site-specific water quality data or other information that demonstrate impairment of one or more designated beneficial uses. If the available water quality data suggested impairment, but the data did not meet IDNR listing guidelines and/or credible data requirements, these waters were considered "potentially impaired" and were added to the list of waters in need of further investigation as provided for in Iowa's credible data legislation and IDNR rules (see Iowa Administrative Code, Chapter 455B, Section 193-195 (<http://wqm.igsb.uiowa.edu/wqa/credibledata.html>)). IDNR has prepared a WINOFI list for every Section 305(b)/303(d) cycle since 2002 when Iowa's credible data law became effective. IDNR views the WINOFI list as a useful and common-sense approach to accurately identifying water quality impairments that will require state staff to develop a TMDL. The draft 2008 WINOFI contains 213 waterbodies (lakes, streams, and rivers) that require further water quality investigations to accurately identify the existence of an impairment. Eighty-four of these waterbodies are new to the 2008 WINOFI list.

Response to Question 2 regarding IDNR's failure to mention that treatment processes contributed to the atrazine impairment at West Lake Osceola. IDNR is not clear on the origin of this comment. IDNR staff do not recall stating any hypothesis that water treatment was somehow related to high levels of atrazine in this lake. In fact, West Lake Osceola is not currently impaired for atrazine: the 2008 Section 305(b) assessment for this lake (<http://programs.iowadnr.gov/adbnnet/assessment.aspx?aid=9380>) shows low levels of atrazine and "full support" of the lake's designated Class C (drinking water) uses.

In addition, a TMDL for atrazine was prepared by IDNR staff and approved by U.S. EPA in 2002, thus removing atrazine-related impairments at this lake from the impaired waters list. Any atrazine-related impairments of lakes or rivers designated for drinking water (Class C) uses in the *Iowa Water Quality Standards* (such as West Lake Osceola) are based only on in-lake atrazine (raw water) levels and do not reflect atrazine levels in finished water that may be influenced by treatment processes. Iowa DNR does, however, make every attempt to ensure that all Section 303(d) impairments are sufficiently supported by site-specific and credible monitoring data and other water quality information to justify the impairment and preparation of a TMDL. As noted previously in IDNR's response, if the site-specific credible data are not available to demonstrate an impairment, the water is either not assessed or is placed on the state's list of waters in need of further investigation (WINOFI list).

Response to Question 3 regarding the need to evaluate a treatment-related impairment more closely before IDNR places the water on the list of impaired waters: IDNR maintains that (1) West Lake Osceola is currently not impaired for atrazine, (2) water treatment is not related to the historically high levels of atrazine in West Lake Osceola, and (3) treatment-related issues are not considered when identifying impairments based on raw water sampling.

IFBF Comment 5 on IDNR's Section 303(d) listing methodology: Potential issues with lake data used by IDNR for the 2008 assessment/listing cycle. IFBF notes that on page 20 of IDNR's draft assessment and listing methodology (<http://wqm.igsb.uiowa.edu/wqa/303d/2008/Draft08Methodology.pdf>), reference is made to two sources of data used to develop the 2008 lake assessments and listings: Iowa State University (ISU) and the University of Iowa Hygienic Laboratory (UHL). The IDNR methodology states that the ISU data were collected during summer seasons (June, July, and August) and that the UHL data were collected from May through October of 2005 and 2006, in part, to supplement to the ISU data. IFBF notes that during an unspecified discussion on lake water quality standards, surprise was expressed (presumably by IDNR staff) regarding the UHL lake monitoring effort. During this discussion, there also was concern expressed regarding potential duplication of lake monitoring efforts between ISU and UHL and regarding how IDNR staff were going to account for or prevent the duplication of data. IFBF requests that IDNR explain how the ISU/UHL lake monitoring issue was resolved for the purposes of impaired waters listing. IFBF also requests that IDNR provide the web link to the ISU and UHL lake monitoring data for transparency purposes. Finally, IFBF requests that IDNR explain how use of data from both ISU and UHL lake monitoring have affected the Section 303(d) listings for the 2008 cycle.

IDNR Response: The issue of having lake monitoring data from both ISU and UHL was resolved by using all these data to develop the 2008 Section 305(b) assessments and Section 303(d) impaired waters listings. IDNR feels that inclusion of the lake data from UHL with the data from ISU served to improve our lake assessments for the 2008 Section 305(b)/303(d) cycle. A common problem with water quality assessments—and especially for lake water quality assessments—is

basing conclusions regarding impairment on too few data to accurately characterize water quality conditions. Rather than data duplication, the UHL data from May, September, and October serve to supplement the ISU data collected in June, July, and August. IDNR believes that inclusion of the additional lake monitoring data improved IDNR's ability to characterize water quality in the monitored lakes and thus improved the quality of the resulting assessments. To the extent that the additional UHL lake data helped to more accurately characterize lake water quality, the resulting impaired waters listings were also improved. IDNR does not see a negative aspect of including these additional data. The UHL lake data are in the Iowa STORET water quality database (<http://wqm.igsb.uiowa.edu/iastoret/>) and are stored under IDNR's STORET agency code (21IOWA) and under the following STORET project codes for "UHL Lake Monitoring": LAKAMB05 and LAKAMB06. The ISU lake data are available from the Iowa Lakes Information System at <http://limnology.eeob.iastate.edu/lakereport/> or upon request from staff of the IDNR Watershed Monitoring and Assessment Section (<http://wqm.igsb.uiowa.edu/>).

IFBF Comment 6 on IDNR's Section 303(d) listing methodology: IDNR's use of the "fully supported/threatened" category for lake assessments. IFBF suggests that lake data continuity (presumably due to the advent of lake data from UHL) will cause issues regarding IDNR's use of the fully supporting threatened/monitored" assessment category as described on page 103 of IDNR's draft 2008 assessment and listing methodology (<http://wqm.igsb.uiowa.edu/wqa/303d/2008/Draft08Methodology.pdf>). IFBF questions, given lake data collected over a seven-year period, why IDNR has failed to remove even one lake from the impaired waters list due to trends in water quality.

IDNR Response: IDNR is not sure that IFBF understands the purpose of the "fully supported/threatened" assessment category. As specified in U.S. EPA guidelines for Section 305(b) assessments and Section 303(d) listings (U.S. EPA 2005, 2006; at <http://www.epa.gov/owow/tmdl/2006IRG/>), a water assessed as "fully supporting/threatened" is to be considered Section 303(d)-impaired and added to Category 5 of a state's Integrated Report (i.e., the Section 303(d) list of impaired waters). This category is not, as IDNR believes is suggested by IFBF, a justification for eliminating (de-listing) impaired waters. Because assessments of "threatened" and "impaired" are equivalent (i.e., both lead to a Section 303(d) listing), IDNR has made relatively little use of the "threatened" category for purposes of Section 303(d) listing. For those lakes with data at or near impairment thresholds, the historical (2000-2007) data are reviewed to look for either adverse or improving lake water quality trends. Lakes that demonstrate adverse water quality trends such that impairment is likely within the next two year period are assessed as "fully supported/threatened" and are added to the impaired waters list.

IFBF Comment 7 on IDNR's Section 303(d) listing methodology: IDNR's failure to use data generated as part of NPDES monitoring. IFBF notes that IDNR doesn't appear to be using the chemical or physical data generated part monitoring required by permits issued to wastewater dischargers under the Clean Water Act's national pollutant discharge elimination system (NPDES). Further, IFBF notes that this information is readily

available to the department and is collected by professionals and should thus qualify as credible data. IFBF requests that IDNR explain its decision not to use NPDES data.

IDNR Response: IDNR has historically not used results of NPDES monitoring for purposes of either Section 305(b) assessments or Section 303(d) listings. IDNR's rationale for this decisions is as follows. NPDES data measure effluent quality: there are no additional in-stream data collected as part of NPDES monitoring requirements. These supporting in-stream data would be needed to determine whether wastewater dischargers are causing violations of Iowa's *Water Quality Standards* which are the sole basis for impaired waters listings. Further, NPDES permit limits are based on water quality modeling at critical low-flow conditions. Thus, at base-flow conditions and above, there would likely be no in-stream water quality impact due to wastewater discharges regardless of whether a wastewater treatment facility met or exceeded its NPDES permit limits. Until in-stream monitoring is conducted as part of the NPDES, Iowa DNR has no basis for accurately identifying Section 303(d) impairments based on effluent quality alone. If, however, NPDES requirements were modified to include in-stream monitoring, point source-related impairments could be more easily identified and potentially attributed to specific wastewater dischargers. Any impairments attributed exclusively to point sources would not be considered Section 303(d)-impaired but, according to U.S. EPA guidelines for Integrated Reporting, would be placed in Category 4b of Iowa's Integrated Reports (i.e., other required control measures are expected to result in attainment of water quality standards in a reasonable period of time). Such impairments would thus be addressed through the NPDES and not through a TMDL. Iowa's credible data law also provides that impairments due solely to violations of NPDES permits will not be placed on the state's list of impaired waters.

IAC 455B.195(1)(c): Use or analysis of credible data: *A water of the state shall not be placed on any section 303(d) list if the impairment is caused solely by violations of national pollutant discharge elimination system program permits or stormwater permits issued pursuant to section 455B.103A and the enforcement of the pollution control measures is required.*

Although IDNR lacks a mechanism for identifying impairments exclusively due to wastewater dischargers, IDNR's routine ambient river monitoring network does include monitoring both upstream and downstream of ten larger urban areas in the state; these data are used for purposes of both Section 305(b) assessments and Section 303(d) listings. The upstream/downstream component of IDNR's ambient monitoring program is designed, in part, to capture point source-related water quality impacts from these ten cities.

IDBF Comments on IDNR Compliance with Iowa's Credible Data Law

IDBF Comment 1 on IDNR compliance with Iowa's credible data law: IDNR needs to expand explanation of the credible data law to improve public understanding. IDBF views Iowa's credible data law as an important tool for helping with prioritization of limited financial resources to deal with impaired waters and thus supports IDNR's application of this law and sound science to the listing process. IDBF feels that the placement of a water body on the impaired waters list without the use of credible data would likely be subject to successful legal challenge, especially if subsequent regulations limit land use in the watershed of the alleged impaired water body. For these reasons, IDBF feel that the public needs to understand the credible data law and when this law is required, who can submit data and other important provisions. Thus, IDBF suggests including an explanation of the credible data law in the integrated report and that such explanation contain reference to the following sections of the law as paraphrased by IDBF:

- *Iowa requires (Iowa Code §§455B.193-95) the use of credible data when: 1) developing and reviewing water quality standards; 2) determining whether any water of the state shall be placed on or removed from the impaired waters list; 3) determining a TMDL for impaired waters; and 4) determining if a body of water is supporting its designated use, but credible data is not required in determining a designated use.*
- *The credible data law in Iowa states that data will not be considered credible unless collected and analyzed by a state or federal agency, a professional contractor hired by the lead agency (Department of Natural Resources) or a qualified volunteer. Data collected and analyzed from a qualified volunteer will only be considered credible if the data is reviewed and approved by the state agency.*
- *Other important provisions include the requirement that before a TMDL is set for an impaired water, the pollutant that is causing the impairment must be identified. If the pollutant has not been identified, the body of water can be placed on the state impaired waters list but a TMDL will not be calculated. Also, a waterbody will not be placed on the impaired waters list if the impairment is due solely to violations of NPDES permits or storm water permits.*

IDNR Response: IDNR agrees that the Credible Data Law is an important part of identifying impaired waters in Iowa. Consequently, Iowa DNR's assessment and listing methodology (see <http://wqm.igsb.uiowa.edu/wqa/303d/2008/Draft08Methodology.pdf>) contains numerous references to this law and contains the text of the law relevant to impaired waters listing as Attachment 1. The body of this methodology cites most of the passages recommended by IDBF for inclusion into the Integrated Report. In addition, the Credible Data Law has been referenced at IDNR's impaired waters web page (<http://wqm.igsb.uiowa.edu/wqa/303d.html>) for every biennial listing cycle since the 2002 cycle. For the 2006 and 2008 listing cycles, web links were provided to a full explanation of this law (<http://wqm.igsb.uiowa.edu/wqa/credibledata.html>). Nonetheless, this legislation is of continuing interest to many citizens and natural

resource professionals in Iowa, and the explanation of this law at IDNR's impaired waters web page (<http://wqm.igsb.uiowa.edu/wqa/303d.html>) will be expanded for the 2008 listing cycle to include the information recommended by IFBF.

IFBF Comment 2 on IDNR compliance with Iowa's credible data law: IDNR must follow Iowa's credible data law and prepare separate lists for Section 305(b), Section 303(d), and the list of waters in need of further investigation. As IFBF has stated in comments for previous Section 303(d) listing cycles, Iowa's credible data law requires that the 305(b) list must be separate and distinct from the 303(d) list. IFBF further asserts that IDNR's integration of these two lists through use of U.S. EPA guidance for integrated reporting fails to meet the state's credible data requirements and that IDNR must prepare two separate and distinct lists. IFBF maintains that EPA guidance for integrating the two lists is non-binding and that IDNR must follow Iowa's credible data law, Chapter 455B.195 (*Use or Analysis of Credible Data. 1. f*) that states the following:

When evaluating the waters of the state, the department shall develop and maintain three separate listings including a section 303(d) list, a section 305(b) report, and a listing for which further investigative monitoring is necessary.

IFBF notes that the separate lists required by the credible data law have different uses and scientific data standards for including water bodies, thus, separate lists are necessary to achieve compliance with the data requirements of Iowa law. IFBF expressed concern that integrating the three lists may create confusion over which categories are or are not included on the state's 303(d) list. IFBF admits that these issues may seem minor on their face, but could lead to unforeseen regulatory compliance issues and grounds for future activist lawsuits. Once exceptions have been made and approved, who is to say what deviations may be next. The integrated reports are clearly not the intent of the Legislature.

IDNR Response: The 2008 Section 305(b)/303(d) cycle is the second consecutive listing cycle for which IFBF has objected to IDNR's use of the Integrated Reporting format as recommended by U.S. EPA (http://www.epa.gov/owow/tmdl/2008_ir_memoirandum.html). Iowa DNR continues to feel that no conflict exists between the credible data requirement for "three separate lists" and IDNR's use of the five-part Integrated Report format recommended by U.S. EPA. Because IFBF has previously commented on this issue, Iowa DNR is including, verbatim, its response to this issue from the responsiveness summary from the 2006 305(b)/303(d) cycle (see http://wqm.igsb.uiowa.edu/wqa/303d/2006/IDNR_2006_responsiveness-summary.pdf).

IDNR response to IFBF comments from the 2006 listing cycle regarding the credible data requirement for three separate lists: "IDNR does not view preparation of an integrated (305(b)/303(d)) report as violating requirements of Iowa's credible data law. Strictly speaking, Section 305(b) of the federal Clean Water Act does not require preparation of a "list." Rather, Section 305(b) requires states to report on progress in attaining the goals of

the act; there is no federal requirement to provide a “list” of 305(b) waters. In contrast, Section 303(d) of the Act does require states to provide to EPA a list of waters that are impaired and in need of a total maximum daily load (TMDL). Thus, Iowa has historically prepared a 303(d) list separate from the 305(b) report. Iowa’s Section 303(d) lists have always been a subset of the waters assessed for the purposes of Section 305(b) reporting.”

“During the development of the credible data law in the 2000 Iowa legislative session, IDNR expressed concern that all data used for 303(d) listing and 305(b) reporting might need to meet the requirements of the credible data law. IDNR explained the difference between the intents of these two sections of the Clean Water Act (a more general Section 305(b) summary report versus a very specific Section 303(d) list of impaired waters). IDNR felt that requiring all data to be “credible” would undermine the intent of Section 305(b) to report on general water quality conditions. IDNR’s concerns were recognized by the legislators, and thus the following language was included in the legislation: *credible data shall not be required for any section 305(b) report*. This exemption would allow IDNR to use all types of water quality data and related information to better determine and report the status of water quality in the state.”

“IFBF correctly notes that the credible data law requires that IDNR *shall develop and maintain three separate listings including a section 303(d) list, a section 305(b) report, and a listing for which further investigative monitoring is necessary*. IDNR views its use of U.S. EPA’s recommended format for “integrated” 305(b)/303(d) reporting as consistent with these requirements of the credible data law. IDNR’s rationale is as follows:”

1. “The entire integrated report (Categories 1 through 5) can be viewed as the state’s 305(b) report. The data from all five categories can be, and have been, used to prepare summary information (e.g., tables and figures) that characterize the status of water quality in the state.”
2. “IR Category 5 is the state’s Section 303(d) list of impaired waters. By placing these waters in a separate category, the 303(d) list can arguably be considered a separate list. Also, because Category 5 is a subset of the entire integrated report, this reporting format is consistent with history of the Section 303(d) list being a subset of the Section 305(b) report.”
3. “IR subcategories 2b and 3b represent Iowa’s list of waters in need of further investigation. EPA guidance [U.S. EPA 2005] states that Category 2 of the integrated report is designed to track waters where some uses are fully supported but sufficient information is lacking to assess the other uses. Category 3 is designed to track waters where insufficient information is available to assess whether any designated uses are being attained. In order to comply with Iowa’s credible data law, IDNR created

subcategories 2b and 3b to track waters where limited information suggests a potential impairment but for which further investigative monitoring is necessary to better determine whether water quality standards are being attained. U.S. EPA guidance provides for the state-level creation of such subcategories as part of the integrated reporting process. Thus, IR Categories 2b and 3b serve as Iowa's list of waters in need of further investigation."

Thus, IDNR feels that using the EPA-recommended reporting format for Clean Water Act Section 305(b) and Section 303(d) requirements is not in conflict with Iowa's credible data law. Again, the three lists are as follows:

List 1: Integrated Report Categories 1-5 (which include an accounting of all Iowa waters, assessed and not assessed) comprise the 305(b) report;

List 2: Integrated Report Category 5—and only Category 5—is the state's Section 303(d) list. This list is provided at IDNR's impaired waters web site (<http://wqm.igsb.uiowa.edu/wqa/303d.html>), and this web site has been prepared to be very clear regarding this fact;

List 3: Integrated Report Categories 2b and 3b comprise Iowa's list of waters in need of further investigation (WINOFI). The WINOFI list is also provided as a separate list at the IDNR impaired waters web site (<http://wqm.igsb.uiowa.edu/wqa/303d.html>). Again: IDNR created subcategories 2b and 3b specifically to comply with the requirement in Iowa's credible data law to maintain three separate lists.

IDNR staff that develop Iowa's lists of impaired waters were directly involved with the creation of the credible data law as part of the 2000 legislative session. The requirement in the law for "separate lists" resulted from IDNR's suggestion to legislators to (1) allow non-credible data to be used for the more general Section 305(b) reporting and (2) provide IDNR the option of a using list of waters that need additional monitoring before a defensible decision on listing can be made. IDNR appreciated the incorporation of these suggestions into the final version of the law, and—not surprisingly—IDNR has incorporated the "separate list" requirements into Iowa's Section 305(b) and Section 303(d) reporting/listing process in every reporting/listing cycle since the law became effective (2002). Although IDNR could certainly prepare the "three separate lists" as required by the credible data law, and although these lists could be displayed at the IDNR impaired waters website, IDNR is concerned that the re-formatting and resulting duplication with the Integrated Report categories would serve only to confuse the public and natural resource professionals regarding what constitutes Iowa's list of impaired waters. IDNR will, however, accommodate the separate list requirement of the credible data law in the narrative portion of the IDNR impaired waters web site for the 2008 cycle. This narrative will describe which categories of the Integrated Report are designed to meet the separate list requirement of the credible data law.

IDNR's primary focus regarding Section 303(d) listing is to provide an accurate and scientifically defensible list of impaired waters that can be prioritized for development of water quality improvement plans (TMDLs). Formats and frameworks for submitting this list to U.S. EPA for approval have changed over the years and are likely to change in the future. IDNR continues to believe that its use of U.S. EPA's currently recommended reporting format (Integrated Report) fully complies with the state requirement of Iowa's credible data law to maintain three separate listings

IFBF Comments on IDNR's Use of the Trophic State Index

IFBF comments on IDNR's use of the trophic state index (TSI): IDNR needs to (1) clarify whether IDNR is using the TSI as a narrative standard, (2) demonstrate that supporting information exists to serve as basis for using the TSI and (3) demonstrate that IDNR's use of the TSI is consistent with credible data requirements. IFBF questions whether the TSI is being used as a narrative standard and whether the TSI is used by IDNR only to indicate good water quality. IFBF believes that IDNR's use of the TSI as a narrative standard does not comply with the following requirement in Iowa's credible data law to give priority to numeric standards over narrative standards when indentifying waters to be added to the state's Section 303(d) list: *IAC Chapter 455B.195: Numerical standards shall have a preference over narrative standards. A narrative standard shall not constitute the basis for determining an impairment unless the department identifies specific factors as to why a numeric standard is not sufficient to assure adequate water quality.*

IDNR Response: Note: The 2008 Section 305(b)/303(d) cycle is the third consecutive listing cycle for which IFBF has objected to IDNR's use of the trophic state index on the grounds of failure to comply with credible data requirements. IDNR continues to feel that use of the trophic state index—which is used by several other states for Section 305(b) lake water quality assessments and Section 303(d) impaired waters listings (Linenfelser and Griffith 2007)—does not conflict Iowa's credible data law, is based on existing and approved narrative criteria in the *Iowa Water Quality Standards* [<http://www.iowadnr.gov/water/standards/files/chapter61.pdf>], and is a useful means—and the only means currently available—to identify Iowa lake impairments due to excessive algal growth or turbidity. As stated in Iowa DNR's responsiveness summary from the 2006 305(b)/303(d) cycle (see http://wqm.igsb.uiowa.edu/wqa/303d/2006/IDNR_2006_responsiveness-summary.pdf), the TSI is used as an interpreter of Iowa's narrative water quality criteria at IAC 455(B) 61.3(2) guarding against (1) aesthetically objectionable conditions (61.3(2)(c)) and (2) nuisance aquatic life (61.3(2)(b)).

IDNR response to IFBF Comment 1 on IDNR's use of the trophic state index: IDNR needs to clarify whether IDNR is using the TSI as a narrative standard. Since first using Carlson's (1977, 1991) trophic state

index for Iowa's 2002 listing cycle, IDNR has used the TSI to implement or "interpret" the narrative water quality criteria in the *Iowa Water Quality Standards*. As stated in Iowa DNR's responsiveness summary from the 2006 305(b)/303(d) cycle (see http://wqm.igsb.uiowa.edu/wqa/303d/2006/IDNR_2006_responsiveness-summary.pdf), IDNR uses the TSI as an interpreter of the narrative water quality criteria at IAC 455(B) 61.3(2) that guard against (1) aesthetically objectionable conditions (61.3(2)(c)) and (2) nuisance aquatic life (61.3(2)(b)).

Such waters shall be free from materials attributable to wastewater discharges or agricultural practices producing objectionable color, odor, or other aesthetically objectionable conditions.

Such waters shall be free from substances, attributable to wastewater discharges or agricultural practices, in quantities which would produce undesirable or nuisance aquatic life;

Examples of *aesthetically objectionable conditions* include poor water transparency caused by blooms of algae or high levels of non-algal turbidity that make the lake less desirable (aesthetically unpleasing) for primary contact recreation. Blooms of cyanobacteria (bluegreen algae) can also cause *aesthetically objectionable conditions* due to their ability to create unpleasant floating scums on the water surface or unpleasant odors, both of which can limit the primary contact recreation uses at a lake. In addition, cyanobacteria can be considered a form of *nuisance aquatic life* due to their ability to produce toxins that can adversely affect aquatic life and the uses of the lake for watering by livestock and wildlife. In severe cases, levels of these toxins in lake water can affect human health.

Field staff of the IDNR Fisheries Bureau responsible for management of the lakes considered for TSI-based listings are consulted to confirm, or deny, that aesthetically objectionable conditions or nuisance aquatic life suggested by the TSI values do, in fact. Lakes where both the TSI and IDNR Fisheries staff indicate impairment are assessed as not meeting Iowa's narrative standards and are considered for addition to the state's list of impaired waters.

IDNR response to IFBF comment 2 on IDNR's use of the trophic state index: IDNR's lack of supporting information for use of the trophic state index: IDNR has attempted to provide adequate supporting information on the basis for using the trophic state index in the following attachment to IDNR's 2008 assessment/listing methodology: *Attachment 3: The use of the trophic state index to identify water quality impairments in Iowa lakes for the 2008 Section 305(b) reporting and Section 303(d) listing cycles.* (see

<http://wqm.igsb.uiowa.edu/wqa/303d/2008/Draft08Methodology.pdf>). The following paragraph from this document summarizes IDNR's rationale for using the trophic state index to identify impairments at Iowa lakes:

This lake assessment methodology for Iowa's 2008 integrated (305(b)/303(d)) report involves the use of data from the Iowa State University statewide lake survey with Carlson's (1977) trophic state index (TSI) to identify lakes that do not fully meet the narrative criteria in Section 61.3(2) of the Iowa Water Quality Standards (IAC 2003). This general approach was used for Iowa's 2002, 2004, and 2006 reporting/listing cycles as well. The existence of any lake impairments suggested by a TSI value will be corroborated by IDNR field (Fisheries Bureau) staff. This approach is consistent with Iowa's credible data law and allows assessment of water quality impacts due to parameters that currently lack numeric criteria in the Iowa Water Quality Standards. The use of TSI values for chlorophyll and Secchi depth serves as an interim method of assessing lake water quality in Iowa until numeric criteria for nutrient parameters (phosphorus and nitrogen) and their response variables (chlorophyll-a and turbidity) are adopted into the Iowa Water Quality Standards.

Attachment 3 contains a detailed description of the basis for using the TSI (i.e., Iowa's narrative water quality criteria) as well as the details of how the TSI is used to identify lake impairments. IFBF is correct that IDNR uses the TSI to identify lakes with good water quality; however, IDNR also uses the TSI to identify lakes with poor water quality that justify addition to the state's list of impaired waters.

IDNR response to IFBF comment 3 on IDNR's use of the trophic state index: IDNR's use of the trophic state index is inconsistent with Iowa's credible data law: IFBF asserts that IDNR's use of the trophic state index is in violation of Iowa's credible data law for two reasons: (1) TSI values should not be used as a standard due to a lack of credible supporting data and (2) use of TSI values violates the credible data law requirement that *a narrative standard shall not constitute the basis for determining an impairment unless the department identifies specific factors as to why a numeric standard is not sufficient to assure adequate water quality.*

Regarding the lack of credible supporting data, IDNR maintains that the data used for calculating TSI values meet the requirements of Iowa's credible data law. As stated in IDNR assessment/listing methodology (Attachment 3), the data used to calculate trophic state index values for Iowa lakes are from annual summer-season statewide water quality surveys of 131 Iowa lakes as conducted for the IDNR by Iowa State University. As such, Iowa State University functions as a professional designee of IDNR in conducting this survey, and thus the data generated by this project meet the requirements of

Iowa's credible data law. The data for chlorophyll-a and Secchi depth from these surveys are used with the TSI to assess lake water quality and to identify lakes with impaired water quality.

As stated in Attachment 3 of IDNR's assessment/listing methodology, the specific reason why a numeric standard is not sufficient to assure adequate water quality in Iowa is that the *Iowa Water Quality Standards* do not contain numeric criteria that adequately protect lake water quality from aesthetically objectionable impacts such as algal blooms and poor water clarity. Although such impacts could potentially be addressed by numeric criteria for nutrient parameters (e.g., total phosphorus or total nitrogen) or criteria for their response variables (e.g., algal blooms [as measured by chlorophyll-a] and turbidity [as measured by Secchi depth]), the *Iowa Water Quality Standards* do not contain numeric criteria for either nutrient parameters or for nutrient-related response variables.

In addition, without use of the trophic state index or some other method of implementing Iowa's narrative criteria, IDNR has no reasonable method for identifying nutrient-related impacts at Iowa lakes or for utilizing the data on lake water quality collected as part of the IDNR/ISU statewide lake water quality survey that began in 2000 and continues. Exclusive reliance on numeric criteria for Iowa lake assessments would, in effect, require IDNR to ignore some of the most serious and obvious water quality impacts that occur in Iowa lakes (i.e., algal blooms and poor water clarity).

Commenter 2: *Friends of Beeds Lake*:

IDNR received a total of 73 letters or e-mails signed by a total of 127 persons regarding the addition of an algal impairment to Beeds Lake for the 2008 Section 303(d) listing cycle (see Appendix 2). All letters encouraged IDNR to immediately develop a TMDL to address this new impairment in order improve and protect the watershed as well as to protect the aquatic life and ecology of Beeds Lake. *Friends of Beeds Lake* wish to see improvements to the lake that enhance recreational uses of the lake and surrounding park, thus improving the quality of life for area residents and visitors.

IDNR Response: IDNR appreciates the high level of interest and support to improve water quality at Beeds Lake. Local interest and support are key factors when IDNR determines priorities for TMDL development. At the current time, the TMDL priority list for the next five years (2009-2013) has not been finalized. Priority setting is an involved process that demands a careful analysis of many factors including local stakeholder interest. The support letters from *Friends of Beeds Lake* will be taken into consideration during final analysis. Additionally, a TMDL was previously completed for *E. coli* at the lake, which will be taken into consideration. While nothing is finalized at this time, Beeds Lake is considered a quality candidate to be included in the 5-year priority list. For updates on IDNR's schedule for TMDL development, please check the following IDNR website
<http://www.iowadnr.gov/water/watershed/tmdl/schedule.html>.

Commenter 3: City of Bettendorf (Wally Mook, Director of Public Works):

The city of Bettendorf provided comments on IDNR's identification of a bacterial impairment for Duck Creek in Scott County. Although not disagreeing with the results of IDNR's assessment that show levels of indicator bacteria (*E. coli*) above the applicable Iowa Water Quality Standards, the city of Bettendorf disagrees that the applicable standards for indicator bacteria are appropriate for Duck Creek. The city of Bettendorf feels that (1) the existing bacteria criteria for Duck Creek are impossible to achieve, even in the absence of human activities in this streams watershed and (2) the stream will thus remain indefinitely on Iowa's list of impaired waters. Despite ongoing efforts to identify and remove sources that lead to high levels bacteria in Duck Creek, the city feels that the background levels of bacteria will be sufficient to continue the impairment.

IDNR Response: IDNR has identified two segments of Duck Creek in Scott County as impaired by high levels of indicator bacteria (*E. coli*) for the 2008 listing cycle:

1. Segment IA 01-NEM-0060_1 extending 10.2 miles from mouth of Duck Creek upstream to county road crossing between sections 16-21, T78N, R3E, Scott County. This impairment was placed in Category 5a of Iowa's 2008 Integrated Report. Category 5a impairments require development of a TMDL.
2. Segment IA 01-NEM-0060_2 extending 3.5 miles from the county road crossing between sections 16-21, T78N, R3E, Scott County upstream to an unnamed tributary in section 14, T78N, R2E, Scott County. This segment of Duck Creek was first designated for Class A1 uses in 2006 through implementation of the so-called "rebuttable presumption" that all Iowa streams and rivers are capable of supporting the highest level of water contact recreational use. This impairment was placed in Category 5p of Iowa's 2008 Integrated Report. Category 5p impairments are based on a presumptive designated use. A use attainability analysis (UAA) will be required to determine whether the presumptive use is, in fact, the appropriate designated use for the impaired waterbody.

Results of water quality monitoring in 2004 showed levels of *E. coli* that exceeded the applicable Class A1 (primary contact recreation) criteria for both the geometric mean (126 orgs/100 ml) and the single-sample maximum criterion (235 orgs/100 ml). The 2008 assessment developed to support the Section 303(d) listings for Duck Creek can be found in IDNR's water quality assessment database, ADBNet (<http://programs.iowadnr.gov/adbnnet/index.aspx>). IDNR staff that developed the water quality assessments and impaired waters listings for the 2008 cycle agree with the city of Bettendorf that the Class A1 criteria for Duck Creek are very restrictive and will likely never be achieved, regardless of watershed remediation. Nonetheless, both the state of Iowa and U.S. EPA have approved the designation of

Duck Creek for Class A1 primary contact recreation uses; thus, the respective Class A1 criteria apply, and will continue to apply, to this and many similar Iowa streams.

A use attainability analysis was conducted by IDNR field staff in 2007 to determine whether the presumptively-applied Class A1 (primary contact recreation) use is, in fact, the appropriate use for Duck Creek. The recommendation of the UAA was to designate Duck Creek from its mouth upstream to Wisconsin Avenue (west line, Section 17, T87N, R3E, Scott County) for Class A3 children's recreational use. Because the bacteria criteria to protect Class A1 and Class A3 uses are identical, the UAA recommendation does not represent a relaxation of the criteria for this segment of Duck Creek.

Further, the UAA recommended that from Wisconsin Avenue upstream to the confluence with an unnamed tributary in the SW ¼, SE ¼, section 14, T78N, R2E, Scott County, Duck Creek be designated for Class A2 (secondary contact recreation) uses. The criteria for *E. coli* to protect Class A2 uses (geometric mean of 630 orgs/100 ml; single-sample maximum of 2,880 orgs/100 ml) are less restrictive than the Class A1/A3 criteria. Due, however, to the high levels of bacteria reported from the 2004 sampling, the geometric mean values of *E. coli* would violate the Class A2 criterion, and this segment of Duck Creek would remain Section 303(d) impaired.

In summary, regardless of whether Iowa's existing criteria for indicator bacteria (*E. coli*) can be met in small streams, IDNR is legally bound, through the federal Clean Water Act and through federal regulations (40CFR130.7), to identify Iowa waterbodies that do not meet these criteria and to develop total maximum daily loads (TMDLs) for any such impaired waters. Thus, Duck Creek will remain identified as Section 303(d) impaired for the 2008 Section 303(d) listing cycle and will remain identified as impaired until a TMDL is developed and/or until additional water quality monitoring shows that levels of indicator bacteria meet the applicable Class A (contact recreation) water quality criteria.

Commenter 4: Advocates for a Cleaner Environment:

Advocates for a Cleaner Environment (ACE) is a non-profit group consisting primarily of citizens living in Mitchell County, Iowa. The ACE membership is concerned that nearly all of Mitchell County's rivers and streams are identified as impaired on Iowa's draft 2008 Section 303(d) list. Further, ACE pledge to offer their services and request involvement in IDNR's efforts to develop water quality improvement plans to address these water quality problems.

IDNR Response: IDNR appreciates the concern expressed by the ACE membership and appreciates the willingness to assist IDNR in developing water quality improvement plans. In terms of water chemistry, biotic integrity, and aesthetic appeal, the streams and rivers of Mitchell County have some of the best water quality of any county in the state. As explained below, IDNR feels that the level of impairment of Mitchell County's streams is overstated due to recent changes in the Iowa Water Quality Standards (<http://www.iowadnr.gov/water/standards/files/chapter61.pdf>).

The following table summarizes the Mitchell County impairments identified on Iowa's draft 2008 Section 303(d) list of impaired waters.

Summary of water quality impairments identified for Mitchell County, IA, on Iowa's draft 2008 Section 303(d) list.				
Waterbody Name	Waterbody ID Number	Location of Segment:	Impairment	Impairment Category
Cedar River	IA 02-CED-0110_3	From Rock Creek near town of Orchard to the IA/MN line	Bacteria, biological (freshwater mussel decline), and fish consumption (mercury)	5a and 5b
Burr Oak Creek	IA 02-CED-0490_1	Mouth to Mitchell County Road T46	Biological (low biotic integrity)	5b
Rock Creek	IA 02-CED0510_1	Mouth to unnamed tributary approximately 2.5 miles SE of town of Rock Creek	Bacteria	5p
Spring Creek	IA 02-CED-0520_0	Mouth to approximately 1 mile upstream from town of Orchard	Bacteria	5p
Turtle Creek	IA 02-CED-0530_0	Mouth to east line, S7, T99N, R17W (approximately 2 miles NE of St. Ansgar)	Bacteria	5p
Deer Creek	IA 02-CED-0540_1	Mouth to the Worth/Mitchell county line	Bacteria	5p
Otter Creek	IA 02-CED-0550_0	Mouth to the IA/MN line	Bacteria	5p
Wapsipinicon River	IA 01-WPS-0030_5	from town of McIntyre to north line of S20, T100N, R15W	Biological (low biotic integrity and fish kill)	5b

Of the eight water quality impairments identified for Mitchell County rivers and streams, five are due to levels of indicator bacteria (*E. coli*) that exceed the presumptively applied Class A1 (primary contact recreation) use designation (note: Class A1 recreational uses are those that involve prolonged and direct contact with water with considerable risk of ingesting water). Because the Class A1 use was applied in a “presumptive” fashion (i.e., through rulemaking), and because some or all of the listed Mitchell County stream segments may not be capable of supporting Class A1 uses, Iowa’s draft 2008 list of impaired waters likely overstates the degree to which Mitchell County streams are impaired.

In 2008, U.S. EPA approved IDNR’s presumptive Class A1 designation of all perennially flowing Iowa streams (for more information on Iowa’s rebuttable presumption, see “recently adopted final rules at the following IDNR web site: <http://www.iowadnr.gov/water/standards/protectedflow.html>). For Iowa’s 2008 list of impaired waters, any Section 303(d) impairment of a presumptive use was placed in category 5p of Iowa’s 2008 Section 305(b)/303(d) Integrated Report. Other Section 303(d) impairments were placed in either IR categories 5a (pollutant-caused impairment) or 5b (biological or fish kill impairment).

In order to determine whether the presumptively applied Class A1 use is, in fact, the appropriate use for a given stream, IDNR staff need to conduct on-site investigations that are summarized into a use attainability analysis (UAA) which contains IDNR’s recommendations regarding the highest level of use that the assessed stream can actually support. For example, if the UAA for the presumptively designated Class A1 portion of Deer Creek (IA 02-CED-0540_1) recommends designation for Class A2 (secondary contact recreational uses), a different set of water quality criteria will apply (note: Class A2 recreational uses are those that involve incidental or accidental contact with water and minimal risk of ingesting water). Because the Class A2 bacteria criteria are less stringent than the Class A1 criteria, levels of bacteria that indicate impairment of a presumptive Class A1 use may not indicate impairment for Class A2 uses. The levels of bacteria in all the presumptively impaired Class A1 streams of Mitchell County (Rock, Spring, Turtle, Deer, and Otter creeks) fully meet the Class A2 criteria for *E. coli*. Thus, if the UAA recommendation for any of these streams is for the Class A2 designation, the bacterial impairment for that stream segment will be removed from future lists of Iowa’s impaired waters.

Not all of the Mitchell County impairments, however, are attributable to IDNR’s recent rulemaking activities. Biological impairments have been identified for the Cedar River due to declines in freshwater mussels, and impairments due to low biotic integrity have been identified in the lower portion of Burr Oak Creek and in the uppermost segment of the Wapsipinicon River. Also, the Cedar River in Mitchell County is part of a one-meal per week fish consumption advisory due to high levels of mercury in predator fish (smallmouth bass, walleye, and northern pike); this advisory extends from near Charles City (Floyd County) upriver to the Iowa/Minnesota state line. These types of impairments, however, are not limited to

Mitchell County: impairments due to declines in freshwater mussels have been identified for many river and stream segments in the eastern half of Iowa (although mussel populations in Deer and Rock creeks in Mitchell County are two of only a few streams and rivers that have continued to show good mussel diversity over the last 20 years). Also, the one-meal per week fish consumption advisories have been issued for a number of better-quality rivers in northeast Iowa, including the Upper Iowa and Volga rivers.

In summary, IDNR feels that Mitchell County continues to have high-quality streams and rivers relative to most of the rest of the state. The identification of a number of new impairments for the 2008 listing cycle—which gives the impression of significant deterioration of water quality—was due largely to the (1) addition of a presumptive Class A1 (primary contact recreation) use to all of Iowa's perennial streams and (2) background levels of indicator bacteria which often exceed Iowa's Class A1 criteria. Whether these bacterial impairments remain will depend on recommendations contained in IDNR's UAAs and on U.S. EPA approval of IDNR's UAA recommendations.

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- US. EPA. 2006. Information concerning 2008 Clean Water Act Section 303(d), 305(b), and 314 integrated reporting and listing decisions. Memorandum of October 12, 2006 from Diane Regas, Director, Office of Wetlands, Oceans and Watersheds to Water Directors of Regions 1-10. 17 p. (http://www.epa.gov/owow/tmdl/2008_ir_memorandum.html)

Appendix 1. Persons and agencies providing comments on IDNR's draft 2008 Section 303(d) list of impaired waters:

Commenter	Affiliation / Location	Issue / Comment:
Rick Robinson, Environmental Policy Advisor	Iowa Farm Bureau Federation, West Des Moines, IA	(1) IDNR's methodology for assessment and listing, (2) IDNR's compliance with Iowa's credible data law, (3) IDNR's failure to prepare separate 305(b) and 303(d) lists as required by the credible data law, and (4) IDNR's use of the trophic state index to identify lake impairments.
Seventy-two letters from a total of 126 persons	Friends of Beeds Lake	IDNR needs to address new impairment for algae as soon as possible to improve and protect the watershed and to protect the aquatic life and ecology of Beeds Lake.
Wally Mook, Director of Public Works	City of Bettendorf	Iowa's water quality criteria for bacteria cannot be met in Duck Creek in Scott County, even in the absence of human activities in the watershed.
Kurt Meyer, President	Advocates for a Cleaner Environment	The membership of this group is concerned that many rivers and streams in Mitchell County are on the impaired waters list; this group want to assist IDNR in addressing these impairments.

Appendix 2. Comments received during the public comment period on IDNR's draft 2008 Section 303(d) list of impaired waters:

Comments received on Iowa's Draft 2008 Section 303(d) list:	Page
Iowa Farm Bureau Federation	26
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Advocates for a Cleaner Environment	37

February 3, 2009

Mr. John Olson
Watershed Monitoring & Assessment Section
Wallace State Office Building
502 East 9th Street
Des Moines, IA 50319

RE: Comments on Iowa's Draft 2008 Integrated Report (Impaired Waters List)

Dear Mr. Olson:

The Iowa Farm Bureau Federation (IFBF), the state's largest general farm organization with almost 154,000 members, wishes to express its ideas about the draft impaired waters list, which is part of Iowa's 2008 Integrated Section 305(b)/Section 303(d) Report. The Farm Bureau appreciates the continued actions by the Iowa Department of Natural Resources to improve the listing process so that Iowans have confidence in the list and so that it can be a useful water resources planning tool.

In the past, Farm Bureau has voiced its concern about the EPA pursuing greater regulatory control over non-point source pollution. The TMDL program brings non-point sources including agriculture into a regulatory framework subject to the whims of activist lawsuits. Farm Bureau believes this is beyond the authority of the Clean Water Act.

Farm Bureau supports legislation and regulation that encourages locally designed and implemented solutions to water quality problems. Farm Bureau policy supports voluntary incentive-based approaches based on sound scientific information, technical assistance to landowners and site-specific flexibility. Our comments on the impaired waters list are shaped by this policy and our desire to have a final product that will be a useful water resources planning tool for the nonpoint source community.

It is important for the department to note, as it did in its technical fact sheet, and for the public to understand, that the number of impaired waters on Iowa's draft 2008 Section 303(d) list is nearly 60 percent greater than in 2006 mostly due to a change in the Iowa Water Quality Standards. In March 2006, the primary contact recreation (Class A1) use was "presumptively applied" (or presumed to apply) to *all* of Iowa's streams and rivers with this use designation regardless of size. Prior to this, only selected reaches of Iowa's larger streams and rivers were designated for this use.

Given the large amount of bacteria (*E coli*) from a variety of possible sources in Iowa's streams and rivers, we agree with the DNR that it is likely that monitoring data, if available, would show bacterial impairments in nearly all of these streams and rivers. Therefore, we support the department's decision to place those waters where monitoring data documents bacterial impairments of this presumptive use in subcategory 5p (presumptive) for Iowa's 2008 Integrated Report. EPA guidelines allow states to create additional subcategories in order to refine the reporting process and to better track the attainment status of waterbodies. We also know that Iowa DNR staff is in the process of conducting use attainability analyses for the presumptively designated streams to determine whether the presumptive use is the correct use or whether the presumptive use of primary contact recreation needs to be changed due to local physical limitations

(such as small or shallow channels, limited access, etc.). We agree with the DNR that without this change in the standards, the number of impaired waters would have been similar to changes seen in previous years.

Most of the impairments on Iowa's draft list of impaired waters do not indicate severely or grossly polluted conditions. Iowans need to understand that the difference between assessing a waterbody as impaired may amount to data from as few as one of 36 monthly samples or the absence of a few key aquatic species in a stream. It is critical that the department's communication with the public help Iowans understand that waters assessed as impaired for aquatic life uses often continue to support a moderately diverse aquatic community. Similarly, while high levels of indicator bacteria may suggest impairment and potential risks to persons that use rivers and lakes for swimming, it is important to communicate to the public the fact that reports of waterborne illness historically have been, and continue to be, extremely rare. Fortunately, as the department points out, severe water quality problems in Iowa are rare.

Specific Methodology Comments

The department has come a long way in the last four years in terms of data sharing and transparency, but still there remain gaps in information. To further aid in the public's understanding of a specific water body's ability to meet the state's water quality standards or credible data law, the IFBF asks that the department to add the "Data Source" column back to Category 5, as it was in the 2006 list, and electronically link the entries on the department's web site to the respective data reports, studies and approved quality assurance action plans for qualified volunteers, so that citizens may read the supporting information. This transparency will help the public evaluate the data and rationale used for placement on the list and increase public confidence in the process.

Also, the 305 (b) report is mentioned in the methodology section, but it seems buried and very difficult, if not impossible, to find (it is actually listed as the "ADBNet" on page 27 of the methodology section of the web site). General citizens and even some professionals that may need this information (i.e., an NRCS district conservationist) would be hard pressed to know where to start to find some of this information. The identification and access to this information, the basis for the 303(d) report, needs to be better identified and accessible.

Making sure the 303 (d) list, and the information contained in the 305(b) assessments, are useful to end-users in the agency is also critical and makes the water quality section more effective as a group. Any additional information that can be placed on the list that makes the TMDL prioritization more effective and subsequent assessment more efficient is useful. The ability of end-users within the water quality group at the agency should also be taken into account when creating the list. Additional steps such as listing waters by agency-defined watershed size and potential pollutant source are one example of criteria that could make the list more effective for internal use. Listing the waters in this way, may make it easier to identify logical combinations of segments and impairments for smaller watersheds.

The recent discussion we had about the status of West Lake and atrazine also leads to another question: Are there lakes/streams/rivers on the impaired list that need to be on the waterbodies for further review list? You may recall that you hypothesized that the new impairment is was possibly

occurring due to treatment reasons, yet this reason is not listed in the Update Comments section. If staff truly believes this is the reasons for the impairment, shouldn't the situation be evaluated or monitored more closely before it is placed on a list where it must go through either a TMDL watershed process rather than addressing the in-lake problem (and avoid a long de-listing process)?

On page 20 of the Methodology Section: reference is made to the two types of data used for the lakes data. In this section, ISU data is referenced as being collected during the summer season (June, July, August) and the UHL data collected in 2005 as a supplement to this data (May, September and October). During the lakes water quality standards discussion, there was surprise about the UHL effort and duplication of efforts with ISU. There was also discussion of how staff was going to account for or prevent the duplication of data? How was this issue resolved? Where is the link to that data for transparency purposes? How has this affected the 303(d) listings?

Regarding the Fully Supporting/Threatened and Monitored" listings (see page 103 of the methodology), this may now be an issue due to continuity of data from the ISU Lakes Survey data. Even though the methodology states that although this seven year period (2000-2007) provides barely enough data to determine trends, we do not see one lake eliminated from the list for this reason.

In addition, it doesn't appear that the department is using the chemical or physical parameters gathered as part of the NPDES permits. This information is readily available to the department and it is collected by professionals and should qualify for use under a QA/QC plan. Please explain the disposition of this data.

Iowa's Credible Data Law

Iowa's credible data law is an important tool for helping with prioritization of limited financial resources to deal with impaired waters. We continue to support the department's application of Iowa's credible data law and sound science to this listing process. It helps target limited resources from both the private sector and the government to waters that have impairments due to known pollutants. Federal law does not prohibit the application of this law by the state of Iowa. Moreover, the Iowa credible data law is similar to credible data laws in six other states, and more importantly, none of these have been successfully challenged.

In fact, the placement of a water body on the impaired waters list without the use of credible data would more likely be subject to successful legal challenge, especially if subsequent regulations limit land use in the watershed of the alleged impaired water body. Therefore, it is important for the public to understand when the credible data law is required, who can submit data and other important provisions. We suggest that the integrated report contain a special mention of these facts in law to aid the public in their understanding, such as follows:

Iowa requires (Iowa Code §§455B.193-95) the use of credible data when: 1) developing and reviewing water quality standards; 2) determining whether any water of the state shall be placed on or removed from the impaired waters list; 3) determining a TMDL for impaired waters; and 4) determining if a body of water is supporting its designated use, but credible data is not required in determining a designated use.

The credible data law in Iowa states that data will not be considered credible unless collected and analyzed by a state or federal agency, a professional contractor hired by the lead agency (Department of Natural Resources) or a qualified volunteer. Data collected and analyzed from a qualified volunteer will only be considered credible if the data is reviewed and approved by the state agency.

Other important provisions include the requirement that before a TMDL is set for an impaired water, the pollutant that is causing the impairment must be identified. If the pollutant has not been identified, the body of water can be placed on the state impaired waters list but a TMDL will not be calculated. Also, a waterbody will not be placed on the impaired waters list if the impairment is due solely to violations of NPDES permits or storm water permits.

Separate and Distinct 303(d) and 305(b) Reports

The structure of the integrated report may be problematic in other very important ways. These issues must be sufficiently addressed in the final impaired waters list and in your responsiveness summary.

As stated in our comments during previous report cycles, the 305(b) list must be separate and distinct from the 303(d) list in order to meet the credible data law requirements. We continue to assert that attempts to integrate these two lists does not meet this standard. The department must make certain that it has two separate and distinct lists. As it stands, the “integrated report” can be viewed as violating this requirement.

Section 305(b) reports should be used to characterize water quality statewide, including water quality concerns that are worthy of note and further investigation, but do not constitute use impairments. The 303(d) lists, on the other hand, should represent the subset of waterbodies assessed for the Section 305(b) report with known and reasonably verifiable impairments of a designated use or general use, as defined in the *Iowa Water Quality Standards* that are appropriate for Section 303(d) listing.

In addition, the Draft 2008 Section 303(d) Fact Sheet continues to discuss the EPA non-binding guidance, beginning in 2004, recommending, but not requiring, the integration of the two reports, and further notes the various sections and subsections of the integrated report that comprise the impaired waters list and the water in need of further investigation. However, Iowa’s credible data law, Chapter 455B.195 - Use or Analysis of Credible Data. 1. f. , says, “When evaluating the waters of the state, the department shall develop and maintain three separate listings including a section 303(d) list, a section 305(b) report, and a listing for which further investigative monitoring is necessary.”

As you can see, the separate listings sections have different uses and scientific data standards for including water bodies. Therefore, separate lists are necessary to achieve compliance with the data requirements of Iowa law. The language of the Iowa law is clear on its face and should be followed when compiling them.

Integrating these reports can, for example, create confusion over which categories are or are not included on the state's 303(d) list, and thus, considered impaired, and which waterbodies are not considered impaired. It should be clear to the public that once a waterbody has an approved TMDL, it should no longer be on the 303(d) list. This will help prioritize limited Clean Water Act Section 319 funds and other water and soil program funds for higher priority watersheds.

These issues may seem minor on their face, but could lead to unforeseen regulatory compliance issues and grounds for future activist lawsuits. Once exceptions have been made and approved, who is to say what deviations may be next. The integrated reports are clearly not the intent of the Legislature.

Use of the Trophic State Index

It appears that the department is continuing to use the Trophic State Index (TSI). However, references to the TSI seem to indicate good water quality. After reviewing the methodology and looking at the listed lakes, it is not clear on how the department is implementing or using the TSI values. Please clarify if this parameter is being used as a narrative standard. Continued use of the TSI to determine if a lake is impaired and therefore listed, and whether this satisfies the credible data test, is a concern due to limited supporting information provided by the department for the basis of the decision to use TSI values. These values should not be used as a standard due to a lack of credible supporting data.

Iowa's credible data law, Chapter **455B.195 - Use or Analysis of Credible Data. 1.** h., says, "Numerical standards shall have a preference over narrative standards. A narrative standard shall not constitute the basis for determining an impairment unless the department identifies specific factors as to why a numeric standard is not sufficient to assure adequate water quality."

Therefore, it appears that this standard may not have been met.

These comments are intended to improve the impaired waters listing process, and subsequent TMDL development and implementation. If you should have any questions about these issues, please contact me at 225-5432. Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in black ink that reads "Rick Robinson". The signature is written in a cursive, flowing style.

Rick Robinson
Environmental Policy Advisor

The following persons submitted comments on the proposed 2008 Section 303(d) (IR Category 5) listing of Beeds Lake in Franklin County. On most letters, only hand-written signatures were included; IDNR staff did their best to decipher the correct spelling of the signees. Signatures for which IDNR staff had difficulty determining the correct spelling are noted with a question mark (“?”). Names determined to be unreadable are noted as such. IDNR staff apologize for any misspellings or omissions of names in the following list.

Commenter: Friends of Beeds Lake:	No. signees:	Address	Letter or E-mail?	Date of letter / e-mail
Butch Varrelman	11	Hampton, IA 50441	letter	13-Jan-09
Daryl Humburg; Vern Humburg	2	Hampton, IA 50441	letter	13-Jan-09
Jake Schwebke, Duane Zander, Kent Wheeler, Gary Lewis, Kyle McCormich, Jason Schmidt, Jim Koenen, Dennis Borcharding	8	Hampton, IA 50441	letter	13-Jan-09
Joe Pitsor	1	Hampton, IA 50441	letter	13-Jan-09
Brenda VanWert, Jesse Viet, Jess Hurlan, Jason VanWert	4	Hampton, IA 50441	letter	13-Jan-09
John Hunt Chapple	1	Hampton, IA 50441	letter	13-Jan-09
Phyllis Nelson	1	Hampton, IA 50441	letter	13-Jan-09
Nina Sackville, Phyllis Quintus, Overna Card, Clifford Huff, Jane Huff, Joylyn M. Chapple, Larry Lindlay	7	Hampton, IA 50441	letter	13-Jan-09
Paul M. Happel, John Lapple, Tom Pitts, L.H. Muller, Henry H. Ludens, James Jorgensen, Richard J. Dohrmann	7	Hampton, IA 50441	letter	13-Jan-09
Marvin O. Rodemeyer	1	Hampton, IA 50441	letter	13-Jan-09
Shirley Pitsor	1	Hampton, IA 50441	letter	13-Jan-09
Warren M. White	1	Hampton, IA 50441	letter	13-Jan-09
Keith Freie	1	Hampton, IA 50441	letter	13-Jan-09
Sue Symens	1	Hampton, IA 50441	letter	13-Jan-09

Commenter: Friends of Beeds Lake:	No. signees:	Address	Letter or E-mail?	Date of letter / e-mail
Jason Fink	1	Hampton, IA 50441	letter	13-Jan-09
Jim Barsness	1	Hampton, IA 50441	letter	13-Jan-09
K. Wolf, John Sarduis, David A. Mueller, Harlan Holstad, (unreadable), Kenneth Borscherding, (unreadable), John Sanburg, Mary Mueller, Irene Abernathy, Bernice Borscherding, Darlene Spear, Virginia Holstad, Sarah H. VanWert, Mary J. Marquard, (unreadable)	17	Hampton, IA 50441	letter	13-Jan-09
Monica S. Winters	1	Hampton, IA 50441	letter	13-Jan-09
Pam Giddings (?)	1	Hampton, IA 50441	letter	13-Jan-09
Hailey Krukow, Linda Krukow	2	Hampton, IA 50441	letter	13-Jan-09
Joan Schriber, David Shriber	2	Hampton, IA 50441	letter	13-Jan-09
Steven H. Abbas (?)	1	Hampton, IA 50441	letter	13-Jan-09
Charlene Richtmeier	1	Latimer, IA 50452	letter	13-Jan-09
Paula Mott	1	Hampton, IA 50441	letter	13-Jan-09
Marlys Peterson	1	Hampton, IA 50441	letter	13-Jan-09
Stanley Peterson	1	Hampton, IA 50441	letter	13-Jan-09
Carl and Marian Hageman	2	Hampton, IA 50441	letter	13-Jan-09
Ed and Ella Butler	2	Hampton, IA 50441	letter	13-Jan-09
Kent Morton, Mayor	1	Latimer, IA 50452	letter	27-Jan-09
Larry Spear	1	Hampton, IA 50441	letter	13-Jan-09
Alan Ferris	1	Hampton, IA 50441	e-mail	24-Jan-09
Stephen and Mary Hanson	2	Hampton, IA 50441	letter	19-Jan-09
Keri Holmes	1	Hampton, IA 50441	e-mail	19-Jan-09
David Heyden, president of Friends of Beeds Lake	1	Hampton, IA 50441	letter	13-Jan-09

Commenter: Friends of Beeds Lake:	No. signees:	Address	Letter or E-mail?	Date of letter / e-mail
Elaine Wilcox	1	Hampton, IA 50441	letter	13-Jan-09
Kacey Buman (?)	1	Dumont, IA 50625	letter	13-Jan-09
Charles Welk (?)	1	Ackley, IA 50601	letter	13-Jan-09
Deb Gerdes (?)	1	Aredale, IA 50605	letter	13-Jan-09
N. Blaine Jens (?)	1	Hampton, IA 50441	letter	13-Jan-09
Sheril Bradbeck	1	Dumont, IA 50625	letter	13-Jan-09
Ronald K. Raney	1	Hampton, IA 50441	letter	13-Jan-09
Paul A. Shelton	1	Hampton, IA 50441	letter	13-Jan-09
Mary Booth	1	Hampton, IA 50441	letter	13-Jan-09
Phyllis Spurgeon	1	Hampton, IA 50441	letter	13-Jan-09
Michelle Schaefer	1	Hampton, IA 50441	letter	13-Jan-09
Maidell Sidmore-Van Kleeck (?)	1	Hampton, IA 50441	letter	13-Jan-09
Marcee Sidmore	1	Hampton, IA 50441	letter	13-Jan-09
Sarah Mulford	1	Hampton, IA 50441	letter	13-Jan-09
Luann Huling	1	Hampton, IA 50441	letter	13-Jan-09
Judy K. Wrolson (?)	1	Hampton, IA 50441	letter	13-Jan-09
Joni Svendsen (?)	1	Hampton, IA 50441	letter	13-Jan-09
Robbi Stevens	1	Hampton, IA 50441	letter	13-Jan-09
Carrie F. Blair (?)	1	Hampton, IA 50441	letter	13-Jan-09
Sheree Holmstrom	1	Hampton, IA 50441	letter	13-Jan-09
Cynthia V. Saxon	1	Hampton, IA 50441	letter	13-Jan-09
Sheila Atkinson	1	Bristow, IA 50611	letter	13-Jan-09
Claudia J. Boeding	1	Hampton, IA 50441	letter	13-Jan-09

Commenter: Friends of Beeds Lake:	No. signees:	Address	Letter or E-mail?	Date of letter / e-mail
Deana Hernandez	1	Hampton, IA 50441	letter	13-Jan-09
Cindy Horner	1	Ackley, IA 50601	letter	13-Jan-09
Delma (?) Roberts	1	Hampton, IA 50441	letter	13-Jan-09
L. Erickson (?)	1	Coulter, IA 50431	letter	13-Jan-09
Cindy Shelton	1	Hampton, IA 50441	letter	13-Jan-09
Julie Chrens (??)	1	Hampton, IA 50441	letter	13-Jan-09
Julie Pralu (??)	1	Hampton, IA 50441	letter	13-Jan-09
Amy Holmgaard	1	Hampton, IA 50441	letter	13-Jan-09
Michelle S. Giddings (?)	1	Hampton, IA 50441	letter	13-Jan-09
Kathy Neubauer	1	NA	letter	4-Feb-09
Gwana Wirtzes (???)	1	NA	letter	4-Feb-09
Toni Wilkinson	1	Hampton, IA 50441	letter	13-Jan-09
Heather Schmitt	1	Hampton, IA 50441	letter	13-Jan-09
Nichole Viet	1	Geneva, IA 50633	letter	13-Jan-09
Lindsay Ulenhopp	1	Hampton, IA 50441	letter	13-Jan-09

[Example of comment letter from the members of the "Friends of Beeds Lake":]

Friends of Beeds Lake
1456 Lake Drive
Hampton, IA 50441
www.friendsofbeedslake.hamptoniowa.org
fobl@friendsofbeedslake.hamptoniowa.org

January 13, 2009

John Olson
Iowa Department of Natural Resources
Watershed Monitoring & Assessment Section
Wallace State Office Building
502 East 9th Street
Des Moines, IA 50319

RE: 2008 Draft List of Impaired Waters List

John,

The Friends of Beeds Lake understand that Beeds Lake is to be included in the 2008 Impaired Waters List for the new category Algae. The lake is currently on the list for bacteria and is undergoing testing thanks to an IDALS grant. If Beeds Lake is included in the 2008 list for algae we urge you to consider the immediate development of a TMDL to address the algae impairment so testing and work on the restoration of the lake and watershed proceeds in a timely fashion.

With a seventeen year history of making or initiating changes and improvements to the park and throughout the watershed the Friends of Beeds Lake will use the newly developed TMDL to improve and protect the watershed and so it's aquatic life and ecology. These improvements will restore the waters to a condition that enhances the areas economic value, promote the parks recreational uses and raise the quality of life of the residents of North Central Iowa.

This unique park and watershed are in need of special attention and your assistance will help us immensely in achieving our goals.

Thank you for your consideration,

David Heyden, President of Friends of Beeds Lake

From: Mook, Wally [wmook@bettendorf.org]
Sent: Monday, December 15, 2008 3:43 PM
To: Olson, John [DNR]
Subject: Impairment of Duck Creek in Scott County

Hello John:

I am responding to the opportunity to comment on the proposed recommendations for streams to be added to the 303d list of impaired waterways in Iowa. Duck Creek here in Scott County is shown to be impaired for bacteria. I'm certain this is an accurate statement concerning the health of the stream. My problem is the standard used for this determination. It appears the standard used by the DNR is the amount of bacteria that might make a child "sick" if the child happened to ingest some of the stream water during contact activities, such as wading or fishing. I believe this standard is impossible to achieve even if all human activities in the vicinity of the stream were halted. This number (standard) is even less than what would be a background value for the stream in a totally non-urban environment. As such it will be impossible for the stream to be removed from the impaired list because it will not be possible to remove enough of the bacteria producing activities to achieve this extremely low value. I am a board member of Partners of Scott County Watersheds and with this group we will be working to create a plan to identify and remove sources of bacteria. Once again, it will be impossible to do enough to remove Duck Creek from the list, with the current standards in place. I am still unsure as to the outcome of leaving a stream on the impaired streams list for an extended period of time. Thanks!

Wally Mook, PE, CPESC
Director of Public Works
City of Bettendorf
4403 Devils Glen Road
Bettendorf, Iowa 52722
563-344-4055
563-344-4059 Fax

Mr. John Olson
Iowa Department of Natural Resources

Dear Mr. Olson:

I am writing today on behalf of Advocates for a Cleaner Environment (ACE), a nonprofit organization consisting primarily of citizens living in Mitchell County. I serve as president of the organization and the comments conveyed in this letter, although written by me, are meant to capture sentiments of ACE members expressed at our recent January meeting. At that time, the impaired waters list was a significant topic of discussion.

We reviewed maps showing that, with the exception of the Little Cedar River, virtually every one of our rivers and creeks are on the impaired waters list. Needless to say, this got our attention.

The high incidence of impaired waters in Mitchell County is simply unacceptable to us as committed local citizens and to our organization, dedicated to working for an improved environment.

My fellow ACE members and I are eager to learn more, to collaborate with you and your DNR colleagues, and, ultimately, to address the problem of impaired water quality in our rural community. Whereas we may hope to point the finger of guilt at industry or perhaps negligent agricultural practices, the truth is, we don't know what's causing this problem, whether the situation is getting better or worse, or what can be done to address our polluted waterways.

After considerable discussion and reflection, ACE members pledge our personal and collective energies to work with you – and ask you to work with us – to help us take action. For example, we want to shape and share in a water quality improvement plan. We want to inform and engage more people in our region... first, with facts about area rivers and streams, and second, about steps that we must take to remedy the impaired waters situation. Furthermore, we want to urge our neighbors to the north (Mower County, Minnesota) to cooperate with us in addressing this challenge.

We are prepared and committed to doing everything we can to help bring about positive environmental changes. At the same time, we know we'll need help. We look to you for assistance and hope that by working together, we will soon have cleaner waters in Mitchell County.

Respectfully submitted,

Kurt Meyer, President
Advocates for a Cleaner Environment
Meyer6601@aol.com
1360 487th Street, St. Ansgar, IA 50472