

# TRIENNIAL REVIEW WORK PLAN

2015-2017

May 27, 2015



IOWA DEPARTMENT OF NATURAL RESOURCES

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# TRIENNIAL REVIEW PROCESS SUMMARY AND WORK PLAN



**2015-2017**

## **Executive Summary**

The Triennial Review Process is outlined in the Clean Water Act ('the Act') (Sec. 131.20) to give voice to the public on their individual state's water quality. Iowa Department of Natural Resources (hereinafter referred to as the Department) completes this process regularly in varying forms; however, this is the first period where the Department is attempting to standardize and formalize this process. This report describes how Iowa has conducted this process, to interact with the public and enact changes based on their feedback for the period from 2015 to 2017. It also details the decision making periods, technical advisory committee (TAC) formation, and final determinations that came as a result.

As a result of this process, three key areas were identified as being priorities based on their importance, ability to be carried out, and on existing projects. These higher priority items include ongoing work with Use Attainability Analysis (UAA), continuing work on the Wasteload Allocation Procedure (WLAP), and continuing work on the Copper Biotic Ligand Model (Copper BLM). There are two secondary items the Department will look at once the high priority projects are completed. These items include Total Dissolved Vs. Total Recoverable Metals (specifically aluminum) and evaluation of the effectiveness of the Antidegradation policy. This work will have to occur at the same time as ongoing projects. The Department will again be at the start of its next Triennial Review period in 2018.

## **I. Objective**

The Triennial Review is a process outlined in the Clean Water Act ('the Act') (Sec. 131.20). According to the Act, a state "shall from time to time, but at least once every three years, hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards". A more complete excerpt can be found in Appendix A, Clean Water Act Triennial Review Provision.

One of the key goals of this provision of the Act is to give the public a way to directly participate in the water quality goals for their state's water bodies. For the public that has an interest in participating in how the Water Quality Standards are set up, this is a direct mechanism that provides a forum for their ideas. Proposed changes can include a variety of topics, and in Iowa, we opened up the floor to any and all ideas as they related to Water Quality Standards.

The other primary goal of the Triennial Review is to consider new data and research for streams. Is there new information about how these streams are being used by people/aquatic life? Is new research available that shows some compounds may be of more or less concern than previously known? Are there new trends, new ways the standards might be evaluated to promote protection of Water Quality in our state?

The Triennial Review process described in this Work Plan is the work completed in 2014 to develop a work plan for the next three years until 2017. The key goals identified in this work plan will guide the course of the Department's Water Quality Standards Monitoring and Assessment Section for the next three years.

## II. Background

A timeline and summary of the Triennial Review process is included below as Table II-1:

**Table II-1.1. Triennial Review Process Timeline**

<b>Date</b>	<b>Meeting</b>	<b>Notes</b>	<b>See Report Section</b>
February 17, 2014	DNR Internal Stakeholder <sup>1</sup> Meeting	Met with other DNR program areas and 2011 technical team	Section III-1, pg. 5 Appendix B – 2011 Meeting Notes Appendix C – Meeting Notes
February 27, 2014	EPA Region VII <sup>2</sup> Meeting	Discussed previous work plan and EPA's wish list	Section III-2, pg. 8
June 16, 2014	DNR WQMA <sup>3</sup> Meeting	Internal discussion on what might be reasonably accomplished in three years	Section III-3, pg. 9
August 20, 2014	External Stakeholder Meeting <sup>4</sup>	Met with external stakeholders/organizations to learn interests concerns	Section III-4, pg. 10 Appendix D – Minutes
September 3-9, 2014	Six public meetings	Met with and took comments from the public	Section III-12, pg. 10

<sup>1</sup>DNR Internal Stakeholders are those staff and program areas that work with Water Quality Standards (Iowa Administrative Code 567 – Chapter 61) either directly or indirectly, but whom may be affected by its outcome.

<sup>2</sup>EPA Region VII is the EPA Region the State of Iowa is located in, and the DNR works with staff from their office regarding EPA federal requirements.

<sup>3</sup>WQMA is the abbreviation for Water Quality Monitoring and Assessment Section.

<sup>4</sup>EPA

### III. Results of Key Triennial Review Response Meetings

The following sections walk through the key response-gathering phases of the Triennial Review process. Results of each key stage will be summarized as well. Detailed information will be provided in the respective appendices.

#### DNR Internal Stakeholder Meeting, February 17, 2014

The Department's Water Quality Monitoring and Assessment (WQMA) Section, which oversees Water Quality Standards and the Triennial Review process, initiated the Triennial Review process on February 17, 2014. An internal stakeholder meeting was convened on that day to talk with our other Department program areas that use the Water Quality Standards (Iowa Administrative Code 567 Chapter 61) rules or are indirectly affected by them. Members of the previous technical team from 2011, some of whom are also external stakeholders that the Department works with periodically, were also invited to attend. The purpose of this meeting was two-fold: 1) to meet with our internal stakeholders to learn their priority issues and if there were any new concerns on the horizon, and 2) to update internal and external stakeholders on the status of work from the 2012-2014 Triennial Review Work Plan (see Appendix B for the abridged version of this previous work plan). Those that could not make it were encouraged to provide feedback via email, mail, and/or phone.

During this Department internal stakeholder meeting, the group was updated on the status of various projects. A quick summary of status is available in **Table III-1.1. 2012-2014 Triennial Review Work Plan Status in February 2014** on the next page. More detailed information from the meeting can be found in the meeting minutes in Appendix C.

**Table III-1.1. 2012-2014 Triennial Review Work Plan Status as of February 2014**

<b>Work Plan Activity</b>	<b>Status</b>
Nutrients	<ul style="list-style-type: none"> <li>In mid-2011 it was determined nutrients would be handled under the joint DNR-IDALS-ISU<sup>a</sup> Nutrient Reduction Strategy. This strategy will allow a combined approach to address point source and nonpoint source discharges. Adam Schnieders is the contact of that program area.</li> <li>Draft Report entitled, "Development of Nutrient Enrichment Criteria for Iowa Streams, dated August 23, 2013" prepared</li> </ul>
Wasteload Allocation Procedure	<ul style="list-style-type: none"> <li>Document is being reviewed and prepared for internal and external review.</li> </ul>
Use Assessment/Use Attainability Analyses (UAAs)	<ul style="list-style-type: none"> <li>Approximately 1,415 stream segments assessed through Batch #4 with over 8,000 miles of stream assessments completed.</li> <li>Batch #5 is being drafted and has approximately 59 streams and 39 facilities</li> <li>Batch #6 field work will be occurring Summer 2014</li> </ul>
Copper Biotic Ligand Model	<ul style="list-style-type: none"> <li>DNR has had preliminary stakeholder meetings</li> <li>Plans to assemble a technical team meeting</li> </ul>
Metals Criteria <ul style="list-style-type: none"> <li>Dissolved vs. Total Recoverable</li> </ul>	<ul style="list-style-type: none"> <li>Limited research completed on how different program areas and samples use total dissolved versus total recoverable and what some of the complicating factors might be in translating/converting between the two</li> </ul>
<ul style="list-style-type: none"> <li>Arsenic</li> </ul>	<ul style="list-style-type: none"> <li>Work not completed to date</li> </ul>
<ul style="list-style-type: none"> <li>Copper</li> </ul>	<ul style="list-style-type: none"> <li>DNR has started preliminary stakeholder discussions and plans to proceed with assembling a technical team meeting</li> </ul>
Lakes and Wetland designated uses	<ul style="list-style-type: none"> <li>Preliminary research completed on separating lakes and wetlands</li> </ul>
Cold Water Streams	<ul style="list-style-type: none"> <li>Preliminary research completed and indicated only one stream had been identified to-date as Cold Water – Type 2 [B(CW-2)]</li> </ul>
Antidegradation	<ul style="list-style-type: none"> <li>Work not completed to date; need additional time to see how it is working to evaluate effectiveness</li> </ul>

<sup>a</sup>DNR-IDALS-ISU are the acronyms for Iowa Department of Natural Resources, the Iowa Department of Agriculture and Land Stewardship, and Iowa State University, respectively.

Items brought up during this meeting as being of interest are highlighted in the following table, **Table III-1.2. Internal DNR Stakeholders/Previous Technical Team Meeting Priority List.**

**Table III-1.2. Internal DNR Stakeholders/Previous Technical Team Meeting Priority List<sup>a</sup>**

Desired Action Item	Notes
Arsenic	<ul style="list-style-type: none"> <li>DNR has to prepare arsenic TMDL for Mississippi River</li> <li>Human health standard is artificially low, 0.18 µg/L, due to low detection limits</li> </ul>
Bacteria Standard	<ul style="list-style-type: none"> <li>Practicable documents compliment TMDL/WLA &amp; Standards</li> </ul>
Cold Water	<ul style="list-style-type: none"> <li>Not moving forward is holding up science and related funding</li> <li>There is credible data</li> </ul>
Controlled Discharge Lagoons (CDLs)	<ul style="list-style-type: none"> <li>Application of Water Quality Standards to CDLs</li> </ul>
Dissolved versus Total Recoverable	<ul style="list-style-type: none"> <li>Bioavailability (dissolved) versus total metals</li> </ul>
Flow Variable Limits	<ul style="list-style-type: none"> <li>Review keeping flow variable limits; don't take away tools</li> <li>Wasteload Allocation Procedure</li> </ul>
"Free from" Acutely Toxic – Fathead Minnow	<ul style="list-style-type: none"> <li>Wasteload Allocation Procedure</li> </ul>
Impairments	<ul style="list-style-type: none"> <li>Metals</li> <li>Bacteria</li> <li>Communicate what impairments mean through Water Quality Standards</li> </ul>
Iron Water Quality Standard	<ul style="list-style-type: none"> <li>Review the Iron Water Quality Standard/policy of 1 mg/L</li> </ul>
Method Reporting Levels	<ul style="list-style-type: none"> <li>Low limits</li> </ul>
Nutrients	<ul style="list-style-type: none"> <li>Follow 2016 timeline for numeric criteria per Stoner Memo</li> <li>Start numeric criteria with Lake Nutrients</li> <li>Keep moving forward on streams</li> <li>Show results of nutrient treatment, more evidence</li> <li>Keep evaluating the science regarding nutrients</li> <li>What does numeric criteria do &amp; how do they relate to what we are trying to do</li> <li>Ongoing nutrient discussions with other stakeholders</li> <li>Assurance from Governor, DNR, IDALS, ISU: how much pollution, measuring pollutants, goal – 10 mg/L, transparency</li> <li>Consider the nutrient credit trading program</li> </ul>
Surface Water Classification Document	<ul style="list-style-type: none"> <li>Make more readable in the future, with GIS</li> </ul>
Temperature	<ul style="list-style-type: none"> <li>Some streams are abnormally high</li> <li>Clarity on changes in regulation</li> </ul>
Toxics – 2007 Metals	<ul style="list-style-type: none"> <li>Different standards for B(WW-2) and B(WW-3)</li> </ul>
Toxics – Month-to-month limits	<ul style="list-style-type: none"> <li>Wasteload Allocation Procedure</li> </ul>
Use Assessment/Use Attainability Analyses (UAAs)	<ul style="list-style-type: none"> <li>UAAs need to be completed on streams without NPDES point source</li> <li>Merge UAA batches or send them close together</li> <li>Separate designated uses for effluent-dominated streams, low flow streams</li> </ul>

<sup>a</sup>Items are listed in alphabetical order and order of priority or importance should not be construed based on order in this list.

**EPA Region VII Meeting, February 27, 2014**

The Department met with EPA on February 27, 2014, to update them on the status of the 2012-2014 Triennial Review Work Plan as well as find out their wish list for Triennial Review action items. The same information was provided to them as to the Internal Stakeholders (see above **Table III.1.1. 2012-2014 Triennial Review Work Plan Status in February 2014** for additional information).

At that meeting, EPA detailed their concerns for the upcoming three-year period, which are presented in **Table III-2.1. Environmental Protection Agency’s Three-Year Priority List** below:

**Table III-2.1. Environmental Protection Agency’s Three-Year Priority List**

<b>Work Plan Activity</b>	<b>Detail</b>
Updating the Human Health criteria and Human Health designations	<ul style="list-style-type: none"><li>• Human health designated uses where conditions allow for fish consumption activities</li><li>• This includes streams that are not necessarily designated as A1 Primary Contact and Warm Water – Type 1 or Cold Water – Type 1 streams, but where fish consumption activities might still be occurring</li></ul>
Disapproved UAAs	<ul style="list-style-type: none"><li>• EPA will be working on its list of Disapproved Streams to see if revisiting the stream locations may be able to answer questions that have resulted in a reserve status or disapproval.</li></ul>
Ammonia and Recreational Criteria Adoption	<ul style="list-style-type: none"><li>• Adopt the EPA-recommended ammonia and recreational criteria</li></ul>

## DNR Water Quality Monitoring and Assessment Pre-Meeting, June 16, 2014

On June 16, 2014, staff from the Department's Water Quality Monitoring and Assessment Section met to discuss which of the items brought to our attention so far in the process – and including uncompleted items from the 2012-2014 Triennial Review Work Plan – were Department priority and/or could be reasonably completed in the next three-year period based on staffing, resources, etc. This was NOT a meeting to say other items were off the table for discussion, but was rather intended as a starting point for discussion.

Items identified by the Department as priorities that have reasonable potential to be completed in the next three years are identified in **Table III – 3.1. DNR's Three-Year Priority List**.

**Table III-3.1. DNR's Three-Year Priority List**

<b>Work Plan Activity</b>	<b>Detail</b>
Copper Biotic Ligand Model	<ul style="list-style-type: none"><li>• Broad approval of this site-specific approach</li><li>• Preliminary research work has been completed</li></ul>
Wasteload Allocation Procedure	<ul style="list-style-type: none"><li>• This has been an ongoing project with significant involvement already from EPA and stakeholders</li><li>• Draft updated and revised Wasteload Allocation procedure close to completion</li></ul>
Total Dissolved vs. Total Recoverable Requirements	<ul style="list-style-type: none"><li>• Changing sampling requirements here could address potential impairment questions and other sampling concerns</li><li>• Broad potential impact</li></ul>
UAAs	<ul style="list-style-type: none"><li>• Ongoing, statutory requirement associated with authorizing NPDES permits as well as stream impairment issues</li></ul>
Lakes and Wetlands Designated Uses	<ul style="list-style-type: none"><li>• DNR already has a Wetlands Program Plan established, so this will be looked at as part of that program area</li></ul>

**External Stakeholder Meeting, August 20, 2014**

The Department held an external stakeholder meeting on August 20, 2014. External stakeholders are groups and organizations outside of the Department that may be affected by proposed outcomes of the Triennial Review process and include environmental, agricultural, and industrial stakeholders. A transcript from this meeting is available in Appendix D. A summary of key Triennial Review wish list items is shown in **Table III-4.1. External Stakeholder Meeting Priority List**.

**Table III-4.1. External Stakeholder Meeting Priority List<sup>a</sup>**

Desired Action Item	Notes
Arsenic	<ul style="list-style-type: none"> <li>• Mississippi River arsenic violation</li> <li>• Different standards from our neighboring states</li> <li>• An impairment issue</li> </ul>
Antidegradation	<ul style="list-style-type: none"> <li>• “Something to start looking at as it has been a few years now”</li> <li>• Concern on how Tier 2 antidegradation reviews are being applied</li> <li>• Definition of pollutant of concern vs how it’s being applied in the field</li> <li>• Situations where plants are wanting to switch chemicals in their cooling towers/reverse osmosis systems</li> </ul>
Copper BLM	<ul style="list-style-type: none"> <li>• “Agree with the prioritization of continuing on Copper BLM”</li> </ul>
Controlled Discharge Lagoons (CDLs)	<ul style="list-style-type: none"> <li>• How are Water Quality Standards applied to CDLs?</li> <li>• Water quality impacts on ammonia from CDLs.</li> </ul>
Iron Water Quality Standard	<ul style="list-style-type: none"> <li>• “Right now we’re using narrative criteria”</li> </ul>
Human health designations/criteria	<ul style="list-style-type: none"> <li>• Put some attention to these as “we’re seeing in other states what we’re seeing”</li> </ul>
Method Reporting Levels	<ul style="list-style-type: none"> <li>• A WQS issue, and a Wasteload Allocation Procedure Manual issue</li> <li>• Starting to see standards that have been on books for a few years now hitting the permits and causing issues</li> </ul>
Nutrients	<ul style="list-style-type: none"> <li>• Nutrient criteria needs to be top priority; standard lets you set a measure of effectiveness</li> <li>• Group wants report showing science behind lakes standard’s flaws made public.</li> <li>• Believe that state has enough data to set criteria.</li> <li>• Start with a small subset of five lakes, for example, and use them as an example for criteria.</li> <li>• Others feel the lakes nutrient criteria previously-determined were flawed, statistically, scientifically. Didn’t take regional changes into account, for example.</li> <li>• Disagreement on effectiveness of voluntary nutrient reduction.</li> </ul>
Timeline	<ul style="list-style-type: none"> <li>• Estimate time and follow up and if ahead of schedule revert to parking lot items</li> </ul>
Total Dissolved vs Total Recoverable	<ul style="list-style-type: none"> <li>• “That issue I think is very critical”</li> </ul>
Use Assessment/Use Attainability Analyses (UAAs)	<ul style="list-style-type: none"> <li>• Prioritize these, been a long time since a package to the EPC; “UAAs are our priorities”</li> <li>• Streams that are impaired because rule package hasn’t been passed yet</li> <li>• Effluent-dominated streams issues and developing different</li> </ul>

	<p>numeric standards for B(WW-2) and B(WW-3) streams.</p> <ul style="list-style-type: none"> <li>• B(WW-2) and B(WW-3) are not always effluent-dominated</li> </ul>
Wasteload Allocation Procedures Manual Update	<ul style="list-style-type: none"> <li>• “We think [this] is very critical”; “our priority”</li> </ul>
Wet weather flows and blending	<ul style="list-style-type: none"> <li>• Iowa League of Cities court case vs. EPA. Said EPA cannot dictate how compliance with discharge limits is achieved. May be a Wasteload Allocation Procedure issue.</li> </ul>

<sup>3</sup>Items are listed in alphabetical order and order of priority or importance should not be construed based on order in this list.

## **Six Public Meetings, September 3-9, 2014**

Six public meetings were held across the state in each of the six DNR field office regions from September 3 through September 9, 2014. Prior to the meetings, a press release regarding the meetings was released on July 31, 2014, in the *EcoNewswire* and the *Iowa DNR Water Quality ListServ*. This press release is excerpted below:

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### **IOWANS INVITED TO HELP SET WATER QUALITY GOALS FOR STREAMS, RIVERS**

**CONTACT:** Rochelle Weiss, DNR Water Quality Standards Coordinator, at (515) 281-4736 or [Rochelle.Weiss@dnr.iowa.gov](mailto:Rochelle.Weiss@dnr.iowa.gov)

Iowans are invited to attend one of six public water quality meetings held by the DNR across the state. The DNR is gathering Iowans' thoughts on improving the state's water quality goals as part of its three-year review of water quality standards and goals.

The meetings are part of the triennial review process set forth in the federal Clean Water Act, providing opportunity to the public to help set state goals for streams and rivers.

"This is the public's opportunity to tell us what is important to them," said Rochelle Weiss, DNR water quality standards coordinator. "We want to hear Iowans' concerns about potential pollutant levels, how streams are being used and how to protect existing water quality."

The triennial review process ensures water quality standards, as listed in Chapter 61 of the Iowa Administrative Code, are up-to-date. Following the public comment period, the DNR will meet with the stakeholder technical advisory team to consider the public's suggestions.

After identifying issues, the DNR will develop a work plan to address the concerns.

Public meetings will be held at the following locations and times in alphabetical order:

#### Atlantic

Sept. 3, 10 a.m. to 12 p.m.

Rock Island Depot, 102 Chestnut St.

#### Clear Lake

Sept. 9, 4 to 6 p.m.

Clear Lake Chamber of Commerce Lakeview Room, 10 North Lakeview Drive

#### Independence

Sept. 9, 10 a.m. to 12 p.m.

Falcon Civic Center, 1305 Fifth Ave. NE

#### Spencer

Sept. 3, 4 to 6 p.m.

Spencer Public Library (Round Room), 21 East Third St.

#### Washington

Sept. 4, 10 a.m. to 12 p.m.

Washington Public Library (Nicholas Stoufer Room), 115 West Washington

#### West Des Moines

Sept. 8, 10 a.m. to 12 p.m.

West Des Moines Public Library (Community Room), 4000 Mills Civic Parkway

Those not able to attend a meeting may submit written comments by Oct. 15 to:

Rochelle Weiss, Iowa Department of Natural Resources, 502 East Ninth St., Des Moines, IA 50319, or by e-mailing

[Rochelle.Weiss@dnr.iowa.gov](mailto:Rochelle.Weiss@dnr.iowa.gov).

More information, including the full text of Chapter 61, is available at <http://www.iowadnr.gov/InsideDNR/RegulatoryWater/WaterQualityStandards/Rules.aspx> under "Rule Reference Documents."

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A second press release was performed on September 5, 2014, to clear up some apparent confusion in dates surrounding the Clear Lake location. The press release was issued in the *EcoNewswire* and the *Iowa DNR Water Quality ListServ*. This press release is excerpted below:

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#### IOWANS INVITED TO HELP SET WATER QUALITY GOALS FOR STREAMS, RIVERS

**CONTACT:** Rochelle Weiss, DNR Water Quality Standards Coordinator, at 515-281-4736 or [Rochelle.Weiss@dnr.iowa.gov](mailto:Rochelle.Weiss@dnr.iowa.gov).

The DNR is seeking input on improving the state's water quality goals as part of its three-year review of water quality standards. Iowans are invited to attend any of three remaining public water quality meetings.

"This is the public's opportunity to tell us what is important to them," said Rochelle Weiss, DNR water quality standards coordinator. "We want to hear Iowans' concerns about potential pollutant levels, how streams are being used and how to protect existing water quality."

Interested Iowans can attend a meeting next week:

- West Des Moines, Sept. 8, 10 a.m. to 12 p.m., West Des Moines Public Library, Community Room, 4000 Mills Civic Parkway.
- Independence, Sept. 9, 10 a.m. to 12 p.m., Falcon Civic Center, 1305 Fifth Ave. NE.
- Clear Lake, Sept. 9, 4 to 6 p.m., Clear Lake Chamber of Commerce, Lakeview Room, 10 North Lakeview Drive.

Or, send written comments by Oct. 15 to Rochelle Weiss, Iowa DNR, 502 E. Ninth St., Des Moines, IA 50319, or by e-mailing [Rochelle.Weiss@dnr.iowa.gov](mailto:Rochelle.Weiss@dnr.iowa.gov).

The triennial review process ensures water quality standards are up-to-date. Find current water quality standards in Chapter 61 of the Iowa Administrative Code or at [www.iowadnr.gov/InsideDNR/RegulatoryWater/WaterQualityStandards/Rules.aspx](http://www.iowadnr.gov/InsideDNR/RegulatoryWater/WaterQualityStandards/Rules.aspx) under "Rule Reference Documents."

After collecting public comments, the DNR will meet with a stakeholder technical advisory team to consider the suggestions, identify issues and develop a work plan to address the concerns.

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Six public meetings were held around the state September 3 through September 9, 2014. **Table III-5.1. Numbers in Attendance by Field Office Region** shows the numbers of attendees by field office region.

**Table III-5.1. Numbers in Attendance by Field Office Region**

<b>Date</b>	<b>Field Office Meeting Location</b>	<b>Number of Attendees</b>
September 3, 2014 (10:00 AM – 12:00 PM)	Field Office #4 – Atlantic	4
September 3, 2014 (4:00 PM – 6:00 PM)	Field Office #3 – Spencer	3
September 4, 2014 (10:00 AM- 12:00 PM )	Field Office #6 – Washington	11
September 8, 2014 (10:00 AM – 12:00 PM)	Field Office #5 – West Des Moines	20
September 9, 2014 (10:00 AM – 12:00 PM)	Field Office #1 – Independence	21
September 9, 2014 (4:00 PM – 6:00 PM)	Field Office #2 – Clear Lake	9

Transcripts from these public meetings are available upon request. The public comment period was held open until close of business October 15, 2014, so that people could send in additional comments for consideration if they thought of other things after attending the meetings, or were unable to attend one of the meetings.

Participants that were not able to attend the meetings sent in emails and/or letters expressing those concerns. There were a total of 613 comments collected during the Triennial Review process. It would be too expansive to list each comment individually, so similar comments have been grouped into categories. **Table III-5.2. Summary of Public Comments** is shown below.

**Table III-5.2. Summary of Public Comments**

<b>Topic</b>	<b>Number</b>	<b>Key Issue(s)/Recommendation(s)<sup>1</sup></b>
Nutrients, General	505	
Want Nutrient Criteria	421 <sup>2,3</sup>	<ul style="list-style-type: none"> <li>• Nutrient criteria allow you to have a gauge to measure effectiveness.</li> <li>• There is no incentive to reduce nutrients without criteria.</li> <li>• There is enough information available already to establish nutrient criteria.</li> </ul>
Continue with Nutrient Reduction Strategy	10	<ul style="list-style-type: none"> <li>• This is a new program, and it needs time to work. Early evidence indicates some areas of improvement.</li> <li>• Farmers want to do the right thing. Have to make decisions based on cost-benefit analysis. Results should factor that in.</li> <li>• Farmers would like more education on how they can better participate in the NRS.</li> </ul>
Nutrients, Lakes-Specific	33	
Want Lakes Nutrient Criteria	9 <sup>2,3</sup>	<ul style="list-style-type: none"> <li>• Much of this work has already been completed.</li> <li>• Let's start with a handful of lakes, approximately 5-6, in each region, and apply criteria and study how that works.</li> <li>• Provide the report detailing the flaws with the proposed Lakes Nutrient Criteria.</li> <li>• Proceed forward with lakes, but without shallow lakes</li> </ul>
Continue with Nutrient Reduction Strategy	1	<ul style="list-style-type: none"> <li>• Proposed Lakes Nutrient Criteria were fundamentally flawed and did not take into account things such as geographic variability.</li> </ul>
UAAs, stream designations	10	<ul style="list-style-type: none"> <li>• Want to see UAA Batches start moving again.</li> <li>• Merge UAA Batches or send them closer together.</li> <li>• Want UAAs completed on streams without an NPDES point source as well. Could help address some of the impairments.</li> <li>• More user-friendly Surface Water Classification document.</li> <li>• Look at Water Quality Standards and how they relate to CDLs, particularly in relationship to ammonia</li> </ul>
Impairments	9	<ul style="list-style-type: none"> <li>• Communicate what impairments mean in Water Quality Standards</li> <li>• Mississippi River TMDL</li> </ul>
Bacteria; E. coli	8	<ul style="list-style-type: none"> <li>• Bacteria already occurs naturally in the stream from wildlife and birds</li> <li>• The public would like to have their kids be able to play in the water without worrying about them getting sick.</li> <li>• The public wants more transparency regarding beach closings.</li> <li>• The public wants more involvement in the discussion.</li> <li>• People want more education for the public and farmers on this issue.</li> </ul>
WLAP	8	<ul style="list-style-type: none"> <li>• Update is critical. Keep on course with this.</li> </ul>
Arsenic	7	<ul style="list-style-type: none"> <li>• Natural background levels exceed the criteria in many surface waterways</li> <li>• This issue costs industry significantly, particularly those industry along the Mississippi River</li> <li>• DNR has to generate an arsenic TMDL for the Mississippi River</li> </ul>
CAFOs	7	<ul style="list-style-type: none"> <li>• Want more testing of water near hog farms.</li> <li>• People want tougher fines for polluters.</li> <li>• People would like more regulation of previously-exempt farms.</li> </ul>
Regulate Nonpoint Sources	7	<ul style="list-style-type: none"> <li>• Costly to repair lakes getting silted in from runoff</li> <li>• Want a regulatory nonpoint source program</li> </ul>

**Table III-5.2. Summary of Public Comments continued**

<b>Topic</b>	<b>Number</b>	<b>Key Recommendation</b>
Temperature	6	<ul style="list-style-type: none"> <li>• Background stream temperatures are rising, and have been exceeding criteria.</li> <li>• Mississippi River is at the center of much of the discussion.</li> <li>• Standards for temperature not revised since early 1980s.</li> </ul>
Water Quality, general	6	<ul style="list-style-type: none"> <li>• Set measurable goals, advance planning.</li> <li>• Improve water quality.</li> </ul>
Dissolved vs. Total Recoverables	5	<ul style="list-style-type: none"> <li>• Different program areas use different methods, and this creates some difficulty</li> <li>• Issue is important, critical, or is of interest to us</li> </ul>
Triennial Review	5	<ul style="list-style-type: none"> <li>• Provide estimated schedule, and if goals are met, revert to items from 2011.</li> <li>• Communicate with stakeholders how they can help the Department address Work Plan backlog.</li> <li>• Follow same Triennial Review process and report format. Like the 2012 process.</li> <li>• Priority should be given to ongoing, long-term projects.</li> </ul>
Antidegradation	4	<ul style="list-style-type: none"> <li>• The Antidegradation Implementation Procedure has been in place for close to five years. Let's take a look and see what's working and what isn't working.</li> <li>• Add easy and specific process for the public to nominate Tier 2.5 and Tier 3 streams.</li> </ul>
Beach closings	4	<ul style="list-style-type: none"> <li>• The public wants more information about closings, how they come about, when they are removed.</li> <li>• The public wants more opportunities to participate in that process.</li> </ul>
Cold Water Streams – Type 2	4	<ul style="list-style-type: none"> <li>• Fisheries groups want CW-2 stream designation populated with actual stream segments.</li> <li>• Suggestion to use Outstanding Iowa Water Streams to populate the CW-2 category.</li> <li>• Suggestion to have students/volunteers assess streams and upload the information.</li> </ul>
Copper BLM	4	<ul style="list-style-type: none"> <li>• General sense that we have already invested quite a bit of time on this issue already, so let's keep moving forward.</li> </ul>
Trading, Carbon Offsets	4	<ul style="list-style-type: none"> <li>• Look at ways trading can be applied in different program areas including nutrients and carbon offset credits.</li> </ul>
Ammonia Criteria	3	<ul style="list-style-type: none"> <li>• EPA would like Iowa to adopt the ammonia criteria</li> <li>• Industry would like to look into this issue early, so that facilities don't spend a lot of money now to meet criteria that might change in the future</li> <li>• Environmental groups would like adoption of more stringent ammonia criteria.</li> </ul>
River Restoration	3	<ul style="list-style-type: none"> <li>• Restore river systems to their natural function</li> <li>• Healthier rivers can help address nutrient concerns.</li> </ul>
Sediment	3	<ul style="list-style-type: none"> <li>• Concerned with impacts to water quality from sediments</li> <li>• Harsher penalties, regulate nonpoint sources</li> </ul>
Wet Weather Flows and Blending	3	<ul style="list-style-type: none"> <li>• Common sense in application of the standards. In high and low flow, recreation based standards may no longer be applicable.</li> <li>• Look at our procedures in light of Iowa League of Cities vs. EPA court ruling</li> </ul>
CDLs	2	<ul style="list-style-type: none"> <li>• This is related to the ammonia issue and how that affects CDLs.</li> <li>• Consider the application of Water Quality Standards to controlled discharge lagoons.</li> </ul>

**Table III-5.2. Summary of Public Comments continued**

Topic	Number	Key Recommendation
Combined, or Holistic Approach	2	<ul style="list-style-type: none"> <li>Look at Water Quality in a bigger holistic approach, rather than divided into different program areas</li> </ul>
Human Health Criteria	2	<ul style="list-style-type: none"> <li>EPA would like us to update Human Health Criteria and HH designations</li> <li>Look at streams where fish for food consumption might occur, even if not B(WW-1)</li> <li>Other states have been focusing on this issue, we ought to take a look at as well.</li> </ul>
Illegal Dumping_Discharges	2	<ul style="list-style-type: none"> <li>One issue involving suspected illegal waste discharge into a farm field.</li> <li>Question regarding pool water discharging into Iowa Great Lakes. Does that violate the Clean Water Act?</li> </ul>
Iron Standard	2	<ul style="list-style-type: none"> <li>Look at how the iron narrative criteria are being applied</li> </ul>
Lakes and Wetlands	2	<ul style="list-style-type: none"> <li>There is little definition on lakes in general, let alone shallow lake versus wetland.</li> <li>In addition, the reservoir versus natural lake determination has its own set of issues in what criteria should be applied and how.</li> </ul>
Method Reporting Levels	2	<ul style="list-style-type: none"> <li>Look at what should be the appropriate procedures for addressing analysis of compliance data that are below the method detection limits.</li> </ul>
Public Notification	2	<ul style="list-style-type: none"> <li>Better procedures for notifying when it is safe to swim.</li> </ul>
Aluminum	1	<ul style="list-style-type: none"> <li>General comment about not wanting to lose ground on projects dealing with metals such as copper and aluminum</li> </ul>
Dam Removals	1	<ul style="list-style-type: none"> <li>Bigger commitment to dam removals to protect river health</li> </ul>
EPA Livestock Agreement	1	<ul style="list-style-type: none"> <li>Make sure this plan is carried into effect</li> </ul>
EPA Topsoil Preservation	1	<ul style="list-style-type: none"> <li>Maintain EPA's topsoil preservation rule</li> </ul>
Lake Delhi Dam Reconstruction	1	<ul style="list-style-type: none"> <li>Appreciate the removal of all the silt that had built up at the dam.</li> </ul>
Outstanding Iowa Waters (OIW)	1	<ul style="list-style-type: none"> <li>Add East Okoboji Lake to the OIW list or don't treat differently than other Dickinson County Lakes that aren't on list</li> </ul>
PPCPs	1	<ul style="list-style-type: none"> <li>More attention to and research on this issue</li> </ul>
Recreational Criteria	1	<ul style="list-style-type: none"> <li>Adopt EPA's recreational criteria</li> </ul>
Tile lines	1	<ul style="list-style-type: none"> <li>Commenter believes tile lines are altering the water flow of rivers and streams.</li> </ul>
Toxics, Metals	1	<ul style="list-style-type: none"> <li>Different standards for B(WW-2) and B(WW-3).</li> </ul>
Waters of the US Rule	1	<ul style="list-style-type: none"> <li>Educate the public about the Waters of the US Rule.</li> </ul>

<sup>1</sup> = Views are those expressed by the public/stakeholders and should not be construed as DNR's views either for or against the issue.

<sup>2</sup> = To ensure an accurate estimate of true numbers, nutrient comments were filtered to remove the same thought from the same person via different email sources, such as someone who responded via an email campaign for Sierra Club AND Iowa Environmental Council.

<sup>3</sup> = Total numbers and sub-category numbers do not agree because they were filtered as discussed above in footnote #2, and because in some cases, the responder was both for the Nutrient Reduction Strategy and for Nutrient Criteria.

## IV. Work Plan Results

The Department’s Water Quality Monitoring and Assessment Section and the management staff met on October 27, 2014, to walk through the comments, and select action items. The following sections walk through the considerations given each topic and why it was selected or deselected from the work plan.

### Selected Items and Reasons for Selection

The following three items are items the Department feels are priorities and ones it can reasonably accomplish in the next three-year period.

**Table IV-1.1. Selected Work Plan Items**

Topics
Use Assessment/Use Attainability Analyses (UAAs)
Wasteload Allocation Procedure Manual (WLAP)
Copper Biotic Ligand Model (Copper BLM)

*a) Use Attainability Analyses (UAAs)*

Use Attainability Analyses (UAAs) are an ongoing key portion of the Water Quality Standards subsection of Water Monitoring and Assessment Section. In 2006 a rebuttable designation of Primary Contact (A1), Warm Water – Type 1 [B(WW-1)] criteria was applied to all perennial streams in Iowa that were not already previously designated. The UAA process was created to allow the ability to apply the most applicable designation to a stream after an assessment has been conducted to verify site conditions.

Several Department program areas use the results of the UAAs. The National Pollutant Discharge Elimination System (NPDES) Section rules require a UAA be completed before a permit can be renewed.

The stream Impairments programs utilize results of UAAs to determine if the impairment would truly exist if the applicable recreational and aquatic life uses were applied to the stream. It is possible that applying the most applicable stream designation could remove some stream impairments. It is unclear how many streams this would apply to until an assessment is completed.

Two staff performs the field work and draft the UAAs. Results of the UAAs are entered into a rule-referenced document entitled the Surface Water Classification Document. Any change to the Surface Water Classification document must go through rulemaking. The rulemaking process requires preparation of legal documents such as a jobs and fiscal impact statement, Governor’s Office Pre-Clearance Form, introduction to the Environmental Protection Commission (EPC), public hearings across the state, a follow up visit to the EPC, often a meeting with the Administrative Rules Review Committee, follow up revisions, approval by the Attorney General’s Office, and ultimately, review by the Environmental Protection Agency. This can be a multi-year process.

Proposed stream designation changes are assembled as batches. Batch 4 UAAs are in the middle of rulemaking, Batch 5 UAAs are being drafted, and field work for Batch 6 has been completed and drafting of reports has begun. In addition, as the Triennial Review period progresses, additional Batches are likely to occur as well pending active field seasons. The decision will have to be made to run the Batches through the rulemaking process separately or together.

With this UAA process in mind there are periods of time where this can require a great deal of time.

Some other general comments relating to UAAs received in the public comment process:

1. Complete UAAs on streams without an NPDES point source.

The Department has assessed several streams that were not driven by NPDES permitting needs. Whenever staff is in an area completing a UAA for NPDES, and if there is a nearby impaired waterway, the Department is trying to assess those streams.

At this time, NPDES point source dischargers and impaired streams are the key drivers for new assessments. Considering the number of facilities still needing UAAs, it is not top priority to visit streams other than those unless there is a specified reason to do so.

2. Merge UAA batches or send them close together

Where possible, the Department will attempt to keep this in mind. It is important to note that often the delays result elsewhere in the rulemaking process and are outside the control of the Water Monitoring and Assessment Section.

3. More user-friendly *Surface Water Classification Document*

Preliminary versions of a more interactive SWC document have been started. More time and consideration will be needed before this can be completed. If time allows this might be undertaken, but is presently not a priority item.

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*b) Wasteload Allocation Procedure Manual*

The Waste Load Allocation Procedure (WLAP) document provides the technical methodologies to develop wasteload allocations and water quality-based limits to be protective of surface water quality standards as described in IAC 567 Chapter 61 – Water Quality Standards. A Wasteload Allocation (WLA) is the portion of a receiving water’s total maximum daily load (TMDL) that is allocated to one of its existing or future point sources of pollution.

The WLAP was derived from a much older document known as the Basin Support Document. The Basin Support Document needed revisions to make policy updates easier to understand. The end result will be a clearer, better-defined procedure manual that will include updated information and procedures.

A significant amount of work has already been completed in making the new document more precise. In addition, numerous discussions with stakeholders and EPA have already taken place to discuss procedures for many issues (e.g. Temperature and Single Sample Max).

The Department feels this document is a top priority because it does cover so many different areas, the document hasn't been updated for some time, and because it is used and relied upon for so many determinations.

*c) Copper Biotic Ligand Model (Copper BLM)*

Along with the WLAP, addressing issues surrounding copper have been a priority since the last Triennial Review period. After Iowa adopted the current copper criteria, EPA published new copper criteria. The new EPA copper criteria allow use of a completely different approach – The Biotic Ligand Model (BLM). The Copper BLM is a metal bioavailability model that uses receiving water body characteristics to develop site-specific water quality criteria. The BLM requires ten input parameters to calculate a freshwater copper criterion: temperature, pH, dissolved organic carbon (DOC), calcium, magnesium, sodium, potassium, sulfate, chloride, and alkalinity. Iowa has the option to adopt the new EPA copper criteria which has the advantage of using site-specific water chemistry data.

This is favored by most groups as it allows flexibility where the strict copper criteria in Chapter 61 might not be applicable at the same time as it also allows use of site-specific data. This approach has been touted by EPA for some time.

Much work has already gone into the Copper BLM process. The Department met with internal and external stakeholders in 2013. Based on positive feedback from most groups, the Department then formed a technical team to discuss the Sampling Plan. That group met twice in 2014, and a Draft Copper BLM Sampling Guide has been prepared.

The Department and its stakeholders have already invested a significant amount of time moving towards this goal, that the Department seeks to stay on track toward that goal in the next Triennial Review period. Copper BLM is also an item that could be considered part of the WLAP, so it would be recommended to run those two items through the rule making process fairly close together.

**Selected Second Tier Items and Reason for Selection**

The items in this list are ones the Department will begin to take a look at after the three priority items have been completed or as time allows:

**Table IV-2.1. Selected Work Plan Second Tier Items**

Topics
Total Dissolved versus Total Recoverable Metals

## Antidegradation

### *a) Total Dissolved versus Total Recoverable*

This is an ongoing issue from the previous Triennial Review period. In essence, the primary issue involves both metal criteria expression (total vs. dissolved) and implementation of the metal criteria in different Clean Water Act (CWA) programs. Both water quality standards criteria in Iowa and measurements reported by the Department water quality monitoring networks are expressed as total recoverable metals. However, USGS data, used by some program areas within the department, report metals as dissolved. In doing so, it seems the frequency or magnitude of violations when this dissolved data is used is not as high. Specifically there is a concern with aluminum, which is ubiquitous in the soils of Iowa.

The Department will continue to study the implications of this issue. For example, what program areas might be affected, what are other states doing in this regard, would translators be needed, and if so, what kinds?

### *b) Antidegradation*

The Department's revised Antidegradation policy was first implemented in 2010. The department will start to evaluate how the Antidegradation Implementation Policy is working, what changes may be needed, and what is working well.

In performing the Antidegradation evaluation, the department will meet with the different sections that work with the Antidegradation procedure to learn about their experiences with it. The department will also talk with wastewater treatment facilities, industries and municipalities, and other interested stakeholders to gain feedback on how the process is working. The department will evaluate processes and procedures, impacts, and opportunities to improve the process.

## **De-Selected Items**

Following are items that were de-selected as priorities by the Department, and the reasons they were de-selected. The time and effort that was put into the comments received during the Triennial Review is appreciated by the Department. Unfortunately, for varying reasons, not every issue submitted can be a priority for the Department.

### *a) Nutrients, General and Nutrients, Lake*

The Department is committed to the interagency Nutrient Reduction Strategy which is consistent with EPA's framework. Iowa's Nutrient Reduction Strategy proposes a pragmatic approach for reducing nutrient loads discharged from Iowa's largest wastewater treatment plants to be accompanied by targeted practices designed to reduce nutrients from nonpoint sources. This approach can help to protect valuable drinking water supplies, aquatic life, and recreational resources, while continuing to assess suitable nutrient criteria. Therefore this triennial work plan resources will focus on the highest priorities as documented by the public meetings held around the State.

b) *Impairments*

Most of the comments in regards to impairments were conceptual in nature (wanting to reduce impairments), or were referencing nutrients, nonpoint sources, bacteria, metals, or some other area. There were generally not specific recommendations regarding this topic.

While Impairments, or impaired waters, do not fall under the Water Quality Standards program, there has been an effort to determine if UAA's for select impaired stream segments may help to remove the impairment. For more information on impairments, please see the Impaired Waters webpage:

<http://www.iowadnr.gov/Environment/WaterQuality/WaterMonitoring/ImpairedWaters.aspx>

c) *Bacteria, E.coli*

Many of these comments overlapped with beach closings, nutrients, CAFOs, etc. and were fairly general in nature. Please see those sections.

d) *Arsenic*

Arsenic is a common element in the earth's crust. It also poses a health risk to humans and aquatic life. The current Iowa water quality standard is based on the more toxic species Arsenic III. There are no known impairments of Iowa water bodies due to Arsenic III. Historically there has been an assumption in Iowa that total arsenic (a measure of all species) is equivalent to the most toxic form (Arsenic III). Until there is further information to identify the distribution of arsenic among the various species, this will not be a priority.

e) *CAFOs*

Water Quality Standards is not the program area that addresses Confined Animal Feeding Operations. Gene Tinker is the Animal Feeding Operations Coordinator (Gene.Tinker@dnr.iowa.gov).

f) *Regulate Nonpoint Sources*

The comments submitted for this topic were wide ranging. This is a complex issue involving multiple sections of the Department. The Department has a number of programs and strategies in effect working to address nonpoint sources. These include Watershed Improvement programs, Water Monitoring and Assessment, Animal Feeding Operations. However, for many reasons, it is difficult to regulate nonpoint sources, both via a complex range of regulations and by the vary nature of nonpoint sources. The Department believes the Nutrient Reduction Strategy is one of the most effective ways to address nonpoint source pollution. It has programs/procedures to help farmers reduce runoff, and includes researching nutrient criteria that will be science-based and defensible.

g) *Temperature*

Temperature issues are largely related to industry that discharge heated water. Issues can relate to rate of change of temperature to the increasing background thermal temperatures. Discussions to address temperature issues have already begun as part of the Wasteload Allocation Procedure Document, a 2015-2017 Triennial Review Selected Item. Please see that section for more information.

*h) Water Quality, General*

These comments were conceptual in nature (e.g. “We want to see improved water quality”). It is the departments ongoing goal to improve our states natural resources, including water and water quality, as stated in the department’s Mission Statement: To conserve and enhance our natural resources in cooperation with individuals and organizations to improve the quality of life for lowans and ensure a legacy for future generations.

*i) Triennial Review*

Comments on the Triennial Review included thoughts such as “continue with unfinished items from the previous Work Plan”; “estimate schedule of activities quarterly”; “if you finish sooner, can you revert back to items from the previous Work Plan.”

As you will see from the list of Selected Items, many of the items are unfinished items from the previous Work Plan. Many of these items, including UAAs, WLAP, and Copper BLM, are either on-going regular work tasks or already had significant progress made on them during the previous Triennial Review. We seek to continue with them to completion under this work plan.

The Department will again provide an estimated schedule of activities. Unfortunately, the Department is not able to break it down by quarter. Much of the scheduling for these items are out of the Departments hands and the schedule is dependent on the timing from those offices. We move forward as we are able once we get the go ahead from different agencies. We have attempted to estimate timing of when we on our part will attempt to try and move these items forward.

We factored in previous items when selecting priorities for this Work Plan. If priorities are accomplished ahead of schedule it may be possible to work on some issues that are not currently a priority.

*j) Beach Closings*

Beach monitoring – and closings – are not part of the Water Quality Standards program. We will forward thoughts on that issue to the Beach Monitoring program. To learn more about the beach monitoring, please see the Beach Monitoring webpage at

<http://www.iowadnr.gov/Recreation/BeachMonitoring.aspx>

*k) Cold Water Streams*

Cold Water Streams were on the 2012-2014 Triennial Review Work Plan to attempt to populate the Cold Water – Type 2 [B(CW-2)] stream category. B(CW-2) streams are “Waters that include

small, channeled streams, headwaters, and spring runs that possess natural cold water attributes of temperature and flow. These waters usually do not support consistent populations of trout (Salmonidae family), but may support associated vertebrate and invertebrate organisms.” A designation was created and established in rule, but the category was never populated with stream. A file review and research was conducted during the previous Triennial Review period on this issue.

There were reports from a number of different sources saying there is a list of proposed B(CW-2) streams. Department staff went through all the records they could find on the issue, and even went back and talked with Fisheries staff to find any historical information from that period. A list of proposed B(CW-2) streams was never identified.

During the file review, communication was found on the complexity of populating the B(CW-2) category. Streams in this category are the small waterways and rills that serve as spawning grounds, and some of those types of waterways are already classified General Use, and are not to be designated under Chapter 61 Water Quality Standards. An update of the B(CW-2) category would also require a significant update to the 304(a) metals criteria. In light of these issues, the population of that category was deferred at the time of the initial rulemaking for a future date.

A suggestion has been made that volunteers could be utilized to assess streams to help assess B(CW-2) streams. Due to the credible data law, this is not a viable option.

The Department understands the importance of this issue as it relates to funding and is willing to meet with its stakeholders to discuss potential options in regards to funding issues.

*l) Trading, Carbon Offsets*

These concepts are not related to the Water Quality Standards program.

*m) Ammonia*

The EPA released new ammonia criteria in 2013. The department is currently evaluating the impacts of implementing the new standards. After evaluating the impacts of implementation the department may consider including implementation of these standards as part of a future Triennial Review.

*n) River Restoration*

Staff in the Water Quality Standards program area do not conduct activities directly related to river restoration. This is a very broad concept that includes activities and responsibilities across numerous groups and agencies.

*o) Sediment*

Comments provided regarding sediment were largely non-specific, and often merged with the issues related to the Nutrient Reduction Strategy. For more information on this issue, please see the Nutrient Reduction Strategy.

*p) Wet Weather Flows & Blending*

This item did not have enough response to prioritize at this time. However, this is a concept that is a part of the Wasteload Allocation Procedure Manual (WLAP), and this issue will likely be discussed during the continuing phases of that project.

*q) Controlled Discharge Lagoons (CDLs)*

This issue was in regards to how ammonia standards are applied to CDLs. Along with the associated ammonia issue, this item did not have enough response to prioritize at this time. The Department will continue to monitor this issue, and may include it as part of a future Triennial Review.

*r) Combined-Holistic Approach*

These comments related to communication across program areas to solve problems. While potentially beneficial, there can be logistical issues when trying to cross over different program areas. This is worth consideration, but is not a priority.

*s) Human Health Criteria*

There are two key changes necessitated to Human Health Criteria:

1. Adding an "X" under the Human Health [Class (HH)] category to the Surface Water Classification document for a subset of approximately 14 streams. According to rule, these streams are already classified as Class (HH), but the "X" was inadvertently omitted from the SWC after the rule was in place.
2. Looking for streams other than the Primary Contact (A1) recreational use, B(WW-1) aquatic life uses, and Class HH category where people may use the stream for fish consumption.

This item has not been de-selected entirely. Item #1 in this category remains on our regulatory plan, and will be looked into for the next rule making activities. Item #2 will be reviewed as time permits.

*t) Illegal Dumping/Discharges*

Several responders reported specific instances of illegal dumping/discharges. This information was forwarded on to the appropriate field offices for follow up.

*u) Iron Standard*

This item did not have enough response to prioritize at this time.

*v) Lakes and Wetlands Designated Use Classification*

There is currently one classification for both lakes and wetlands. The Department is currently looking into whether it is appropriate to have all lakes and wetlands covered by one classification, or if there is a need for separate classifications to adequately protect different types of lakes and wetlands. Water Quality Standards has already completed some initial review of the literature on these issues. However, there is already a Wetlands Program Plan being developed, and this issue will be moved under that plan at this time.

w) *Method Reporting Levels*

This item did not have enough response to prioritize at this time.

x) *Public Notification*

The majority of public notification comments were tied to beach closings. Beach monitoring and closings are not part of the Water Quality Standards program. These comments will be forwarded to the Beach Monitoring program. To learn more about beach monitoring, please see the Beach Monitoring webpage at

<http://www.iowadnr.gov/Recreation/BeachMonitoring.aspx>

y) *Aluminum*

This was a general comment about not losing sight of updating aluminum. This will be included with the dissolved versus total metal discussions.

z) *Dam Removal*

This is not part of the Water Quality Standards program.

aa) *EPA Livestock Agreement*

This is an issue that is outside of the Water Quality Standards program area.

bb) *EPA Recreational Criteria*

While not on the Departments list of selected items, the Department will continue to monitor this for further consideration.

cc) *EPA Topsoil Preservation*

This is not part of the Water Quality Standards program.

dd) *Lake Delhi Dam*

This is not part of the Water Quality Standards program. The comment was forwarded on to the Floodplains Section.

ee) *OIW*

This issue involved a request to classify East Okoboji as an Outstanding Iowa Water (OIW) or do not treat it as an OIW. This issue did not receive enough interest to make it a priority.

*ff) Pharmaceuticals and Personal Care Products (PPCPs)*

Pharmaceuticals and Personal Care Products (PPCPs) are an emerging issue in Iowa and the rest of the country. Several external groups are leading the way on research in this area. The Interstate Technology and Regulatory Council (ITRC) are leading some discussion on this issue. The United States Geological Survey Bureau has studies related to this issue as well. The Department's ambient stream monitoring program has also collected samples for these parameters to evaluate their occurrence. The Department will continue to monitor this issue as more information becomes available.

*gg) Tile Lines*

The Water Quality Standards program does not work with tile lines, and in most cases tile lines are not regulated by the Department.

*hh) Toxics/Metals*

This issue specifically regarded a desire for different standards for Warm Water – Type 2 [B(WW-2)] and Warm Water – Type 3 [B(WW-3)] streams. This is not a priority for the Department at this time.

*ii) Waters of the US*

The proposed EPA Waters of the US rule is certainly an important topic, but its impact on Iowa is unknown at this time. The Department's Water Quality Standards address Waters of the State.

According to Water Quality Standards, a "Water of the state" means any stream, lake, pond, marsh, watercourse, waterway, well, spring, reservoir, aquifer, irrigation system, drainage system, and any other body or accumulation of water, surface or underground, natural or artificial, public or private, which are contained within, flow through or border upon the state or any portion thereof.

The definition for a water of the state of Iowa is already more broad than the current navigable waterways included under Waters of the US.

## V. Estimated Work Schedule

**Table V-1.1 – Estimated Work Schedule**

<b>Year</b>	<b>Action Item</b>
2015	UAA – Continue with Rule Making for Batch 4 UAAs UAA – Initiate Rule Making for Batch 5 UAAs UAA – Draft Batch 6 UAAs UAA – Field Work for Batch 7 UAAs, as weather permits WLAP – Finish Drafting Document WLAP – Initiate Rule Making Copper BLM – Initiate Rule Making
2016	UAA – Continue with Rule Making for Batch 4 UAAs UAA – Continue with Rule Making for Batch 5 UAAs UAA – Initiate Rule Making for Batch 6 UAAs UAA – Draft Batch 7 UAAs UAA – Field Work for Batch 8 UAAs, as weather permits WLAP – Continue with Rule Making Copper BLM – Continue with Rule Making Total Dissolved vs. Total Recoverable – Start research
2017	Triennial Review – Begin Triennial Review Process UAA – Continue with Rule Making for Batch 5 UAAs UAA – Continue with Rulemaking for Batch 6 UAAs UAA – Initiate Rule Making for Batch 7 UAAs UAA – Draft Batch 8 UAAs UAA – Field Work for Batch 9 UAAs, as weather permits WLAP – Continue with Rule Making Total Dissolved vs. Total Recoverable – Continue research Antidegradation – Start research

**Appendix A**

**Clean Water Act Triennial Review Provision**

Sec. 131.20 State review and revision of water quality standards. (a) State review. The State shall from time to time, but at least once every three years, hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards. Any water body segment with water quality standards that do not include the uses specified in section 101(a)(2) of the Act shall be re-examined every three years to determine if any new information has become available. If such new information indicates that the uses specified in section 101(a)(2) of the Act are attainable, the State shall revise its standards accordingly. Procedures States establish for identifying and reviewing water bodies for review should be incorporated into their Continuing Planning Process. (b) Public participation. The State shall hold a public hearing for the purpose of reviewing water quality standards, in accordance with provisions of State law, EPA's water quality management regulation (40 CFR 130.3(b)(6)) and public participation regulation (40 CFR part 25). The proposed water quality standards revision and supporting analyses shall be made available to the public prior to the hearing. (c) Submittal to EPA. The State shall submit the results of the review, any supporting analysis for the use attainability analysis, the methodologies used for site-specific criteria development, any general policies applicable to water quality standards and any revisions of the standards to the Regional Administrator for review and approval, within 30 days of the final State action to adopt and certify the revised standard, or if no revisions are made as a result of the review, within 30 days of the completion of the review.

**Appendix B**

**2012-2014 Meeting Notes**

## TRIENNIAL REVIEW TAC MEETING NOTES - 6/29/2011 - COMBINED

### ANTIDegradation

#### POLLUTANTS OF CONCERN - DEFINITION

- Pollutants of concern (POC) – concern is that it seems definition doesn't match how it is being implemented, pollutants that are not of concern (distinction)
  - How is it being implemented?
  - Wording makes implementation inconsistent

#### NOMINATE TIER 3 STREAMS - ENCOURAGE NOMINATIONS

- Encourage nominations for populating Tier 3. Some felt that Tier 2.5 happened because there were no Tier 3 streams designated.
- Open up this process for the public. Triennial Review is a good time to do this.

#### INSTEAD OF REQUIRING UPGRADING OF THE TREATMENT SYSTEM, CONSIDER OTHER ALTERNATIVES

- If you could use money to improve stream more but in a different way, that should be an option
- And if a more cost-effective option will work, that should also be an option
- If use is biologically driven – make sure that is taken into consideration and treated differently
- Ammonia and *E. coli* are driving costs without adding in nutrients
- Big impact
- Nutrients are a big issue coming up
- Has to be proven as an alternative, not just an unknown trial. Show results before you can avoid standard requirement.
- Develop mechanism to allow trading
- Develop options for buffer strips, etc.

#### LOOK AT *DE MINIMUS* AGAIN

- Look at *de minimus* again - some areas where it makes sense
- *De minimus* indicates that if you are below a certain amount, you can increase this much without an alternatives analysis.

#### ANTIDegradation IMPLEMENTATION

- Keep looking at implementation and how it is working for a longer time - maybe in three years. Let's study it and see what problems come up. It has only been in place for a year.

### METALS

- Chromium-VI and arsenic becoming more of an issue, on a nationwide level. No active chromium-VI standards. Some felt this area needs more research; others feel that may not be necessary. With

some metals, it's more a matter of how low do you go on detection levels. The Department started looking at arsenic, but withdrew it because other regions were working on it.

- In-ground inputs to chemicals
- Get in front of the issue
- Science moving toward bioavailability. Use parameters in water to determine how much bioavailability.
- Does EPA have info on chromium-VI?
- Have an iron issue - need to decide to make it a criterion or not. There is a white paper on this topic.
- Aluminum - If we address bioavailability, this will cover aluminum.
- Are the labs using the right technique → Method Detection Limits (MDLs)? Questions as to if detection is below an MDL, how is that/will that be handled?
- Some exceedances are occurring because of naturally-occurring background levels. How that plays into the standard - depends on size, site-specific location. Some feel our water quality standards allow this on a site-specific basis now.

#### NUTRIENTS FOR LAKES AND STREAMS

- We need to get this done → critical, not just for Iowa but for downstream (Gulf Hypoxia Zone)
- Coming anyway - better to deal with on state level
- Is the science there to set a numeric criteria - might be other ways
- Concern that the (stream nutrient TAC) isn't going to find cause + effect relationship
- More practical approach needed similar to Kansas, concern that it could end up more like Florida
- Do something now to reduce nutrients rather than wait for numeric standards → while TAC continues
- Science is all over the board
- Rely on best management practices (BMP), technology-based requirements
- Total maximum daily load (TMDL)-based situation
- Important to identify key contributors
- Purpose of numeric standard is to prevent impairments
  - Need way to evaluate nutrients trends, trend toward impairment
- Two nutrient issues: one on macro scale of loads to the Gulf, other is protection of water quality in local streams. Some feel it has to be stream specific.
- Sacrifice local stream quality for gulf improvement - [DISAGREEMENT]
- Stepped, target goals
  - get data to address standards
  - fill holes in the numbers
- Use impaired waters to set priorities
  - ↳ System of setting targets
- Trading program - bang for buck

#### FLOW CRITERIA

- Tighter pollutant limits need ability to use various flow regimes to minimize economic impact while having good water quality

- Important to point sources + how we develop standards for those discharges
- Is this a standard or an implementation issue – Waste Load Allocation Procedure (WLAP)
- Flow variable for specific pollutants → More than one way to address this
- Could look at influent limits for specific pollutants
- Flow needs to be taken into account with ammonia + protection of aquatic life
- EPA has info coming out - Ammonia
- Keep in mind we are losing diversity of mussels, we are losing mussels in Iowa. There are studies to see if they are being impacted by a wastewater treatment facility (WWTF). One downstream of Cedar Rapids.

## TEMPERATURE

- Being addressed in Waste Load Allocation Procedure (WLAP) may mean it doesn't need to be addressed as a standard
- Seems like this is being addressed in the WLAP with the 3°C rise.
- Wanted to be sure this was handled.

## 2007 CHEMICAL CRITERIA - 304(a)

- Policy review - Same criteria for B(WW-1, -2, and -3) Why have B(WW-1, -2, and -3)?
- Would seem different levels of aquatic life protection with different uses.
- Feel like it didn't get the review that it needed
- Set an important precedent
- We have option to adopt EPA recommendations.
- Recalculation methods - deleting species - time-intensive process to delete the species
- Are there particular criteria that are causing problems + address those - shorter list
- 304(a) meant as guidance - need to justify why less stringent

## BIOLOGICAL CRITERIA FOR WETLANDS

- Some wetlands are high quality but are threatened by high nutrients + other nutrients
- Lack of criteria for assessing wetlands
- Iowa Plan could impact existing wetlands + new wetlands created need to be functional
- Might combine w/clean up of lakes designations. Wetlands are different than lakes, with different systems.
- Dissolved oxygen (DO) is one example
- Need to do a wetland designation + then populate criteria
- Find reference conditions + biologic indicators, assessment protocol
- No definition of functioning wetland
  - Help to get funding
- Keep in mind migratory water fowl, they use these wetlands
  - Look at indicators
- Lots of different types of wetlands, would they be handled site-specific

- List of plants, macroinvertebrates, that we could use to rank wetlands
- See how it is working for treatment

#### COLD WATER CRITERIA + DESIGNATING

- Just start doing it
- We have Cold Water Protocol that we haven't implemented, because we don't have criteria.
- Need criteria before we can populate the designated use
- Run into 304(a) criteria issues
- When less stringent, need to justify
- Review fisheries work. They had some candidates for B(CW-2).

#### CLEAN UP LAKE + WETLAND DESIGNATED USES

- Too broad - Flood control reservoirs, wetlands, lakes
- How assessed for health is different. Requires biodata to be developed.
- Critical when we look at lakes vs. wetlands
- Split off wetlands → would need criteria → how close are we?
- Most river lakes designated as streams.
- Dammed up lakes - would not be able to act as a natural lake
- Depth, natural vs. manmade
- Not many designated wetlands. Most are general use.

#### CLASS C DESIGNATIONS

- Area of interest to be explored
- Narrow application, limited to water intake structures
- Might need to be added to standards
- Keep scope focused

#### REMOVE REBUTTABLE PRESUMPTION

- Once UAAs completed for listed National Pollutant Discharge Elimination System (NPDES) facilities, the need for the rebuttable presumption is reduced
- Creates a lot of uncertainty. Some feel most of these are not arguable.
- No funding for those that do not receive a discharge
- As assessed, then designate the use as opposed to the rebuttable presumption and then removing
- Not mandated in the Clean Water Act (CWA) to have rebuttable presumption [DISAGREEMENT on impact of this change]
- If went back to general use, then less protection → that would create problem

## HUMAN HEALTH DESIGNATIONS

- Want to be able to recreate without being concerned about getting sick
- Want to know if there is a specific problem at a particular time
- Smelly days vs. clean streams - needs monitoring + warnings
- We have good warning system for beaches, but not for everything.
- Where do you measure and how do you notify?

## REVISE STANDARDS TO HAVE DIFFERENT LEVELS OF IMPAIRMENT

- Indication of severity of impairment
  1. Don't cause hysteria
  2. What is the level of concern?
- Give high priority to impairments to some water bodies but not others.
- Priorities are addressed in impaired waters list internally → for purposes of targeting
- Need to improve communication
- Look into what we are already doing + communicate that more
- Priorities differ. Example, clean up Lake Rathbun for boating versus clean up of Pine Lake for sensitive brook trout.

**Appendix C**

**DNR Internal Stakeholder Meeting Notes**

**February 17, 2014**

## INTRODUCTIONS

### Attendees:

- Jeff Berckes, Iowa DNR, Watershed Improvement, TMDL Program Coordinator
- Allen Bonini, Iowa DNR, Watershed Improvement, Supervisor
- Roger Bruner, Iowa DNR, Water Quality Monitoring & Assessment, Supervisor
- Larry Bryant, Iowa DNR, Wastewater Engineering, Antidegradation Coordinator
- Satya Chennupati, Wastewater Engineering, Supervisor
- Kevin Condon, Iowa Association of Business and Industry, Director, Government Relations
- Mike Delaney, Raccoon River Watershed Association, Co-Founder and Past President
- Connie Dou, Iowa DNR, Water Quality Monitoring & Assessment, WLA, Wasteload Allocation Coordinator
- Matt Dvorak, Iowa DNR, Water Quality Monitoring & Assessment, WQS, Environmental Specialist
- Christina Gruenhagen, Iowa Farm Bureau Federation, Government Relations Counsel
- Susan Heathcote, Iowa Environmental Council, Water Program Director
- Charles Ikenberry, Iowa DNR, Watershed Improvement, TMDL Modeler
- Linda Kinman, Des Moines Water Works, Public Policy Analyst, Watershed Advocate
- Gabe Lee, Iowa DNR, Water Supply Engineering, DWSRF & Construction Permits
- Brett Lorenzen, Environmental Working Group, Mississippi River Project Coordinator/Trout Unlimited North Bear Chapter, Conservation Chair
- Josh Mandelbaum, Environmental Law & Policy Center, Attorney
- Lori McDaniel, Iowa DNR, Flood Plains & Dam Safety, Supervisor
- John Olson, Iowa DNR, Watershed Improvement, Impaired Waters Listing
- Adam Schnieders, Iowa DNR, NPDES, Supervisor
- Chris Schwake, Iowa DNR, Watershed Improvement, 401 Certification Coordinator
- Greg Sindt, Bolton & Menk, Senior Principal Engineer/Iowa Water Environment Association, Government Affairs
- Mike Smith, Iowa DNR, Solid Waste, Senior Landfill Permitting
- Rochelle Weiss, Iowa DNR, Water Quality Monitoring & Assessment, WQS, Water Quality Standards Coordinator

### Absent due to weather/scheduling:

- Jay Brady, Stanley Consultants, Principal Environmental Engineer/Iowa Water Environment Association, Member and Past President
- Courtney Cswercko, Iowa DNR, NPDES, NPDES Rules, Fees & WWPIE
- Chad Fields, Iowa DNR, Water Supply Engineering, Water Allocation & Use Modeling
- Grant Menke, Iowa Renewable Fuels Association, Policy Director
- Dustin Miller, Iowa League of Cities, Governmental Affairs Manager
- Jeff Vansteenburgh, Iowa DNR, Field Services & Compliance, Field Office 2, Supervisor
- John Veach, Iowa Rural Water Association, USDA Waste Water Technician Regions #3, #4, #5
- Tom Wilton, Iowa DNR, Water Quality Monitoring & Assessment, Nutrient Criteria Development
- Roger Wolf – Iowa Soybean Association, Director of Environmental Services

## MEETING NOTES

### Background

Rochelle Weiss gave background on the Triennial Review:

- Triennial Review was created in the Clean Water Act to allow for public participation.
- Water Quality Standards include three areas: Designated Uses, Criteria, and Antidegradation
- Objective of the meeting:
  - To get everyone on the same page since the 2011 Triennial Review Work Plan
  - Formulate strategy on the actual process
  - Meeting gathered together members from the previous Triennial Review Technical Advisory Committee and internal DNR staff. Done to cut down on number of separate meetings.
  - We want to know about anything that should be on our radar before we go public.
  - We want ideas on how to best notify the public.

### Summary of Today's Activities

- In the morning, we will go over status of 2011 Work Plan items.
- In the afternoon, we will brainstorm about moving forward.
- 2011 Triennial Review Work Plan Divided into two key areas:
  - Existing projects already ongoing in the DNR at the time of the previous review process; and
  - Selected items that resulted from the Triennial Review process

### *Existing projects at time of 2011 Work Plan*

Nutrient Reduction Strategy – Adam Schnieders

- We are working on implementation
- Difficult to discuss numeric criteria
- Up front approach – What can we do now?
- 20 permits per year, 14 issued
  - Plans for nutrient removal
- WRCC report every other month
  - Measures of success
  - Baseline nutrient load
- Nonpoint Source – Trying to get metrics
  - Recognition programs, source water protection
  - May annual report – public participation - Changes, new information
  - Draft report for public comment in May

Stream Nutrient Technical Advisory Committee – Rochelle Weiss for Tom Wilton

- Link to Draft Report entitled, “Development of Nutrient Enrichment Criteria for Iowa Streams, dated August 23, 2013,” is available on our website:

<http://www.iowadnr.gov/InsideDNR/RegulatoryWater/WaterQualityStandards/Nutrients.aspx>

- Report details key findings; TAC is prepared to propose numerical criteria for B(WW-1) and B(WW-2) Wadeable streams and B(CW-1) trout streams.
- Some places we don't have biological reference data, benchmarks
- Wadeable streams we have about 20 years of data, others not enough
- Enough information to start using in monitoring/assessment

#### Wasteload Allocation Procedure – Connie Dou, Lori McDaniel

- Lori and Connie are reviewing the draft document one last time
- Ready for internal and external review
- Put all of the issue papers with explanations into the consultation package format we use for EPA.
- If you are looking for justification or clarification on a particular decision, it will be in the issue papers.
- We tried to keep WLAP as clean and straightforward as possible
- We are still discussing temperature.

#### Use Assessment/Use Attainability Analyses (UAAs) – Rochelle Weiss

- Approximately 1,415 stream segments through Batch 4, well over 8,000 miles of stream assessments have been completed.
- Batch #4
  - Batch 4 has approximately 104 stream segments with 85 stream segments proposed to go through rulemaking, affecting 60 facilities.
  - Difference in numbers is due to streams that are General Use do not have to go through rulemaking (unless they were previously shown on USGS map as perennial).
  - Field work completed in Summer 2011, reports completed in Summer 2012. Reports remain under internal DNR review before proceeding to Governor's Office.
- Field work was largely not completed in 2012 due to drought.
- Because Surface Water Classification document is rule-referenced, any changes to it are required to go through rulemaking. Will see more administrative items going through rulemaking to clean up SWC.
- Batch #5
  - Batch 5 has approximately 59 streams able to be assessed before drought, and approximately 39 facilities.
  - In process of drafting reports.
- Batch #6
  - Approximately 100 of the original UAAs left
  - Will be adding approximately 150 controlled discharge lagoons
- Human Health designations
  - EPA listed this as priority in 2011 work plan, to look at B(WW-1) or B(WW-2) streams that might have human consumption be designated for HH.
  - Also, approximately 15 facilities classified as A1, B(WW-1) that should have had HH added to them.
  - Linda Kinman asked for a list of those streams.

- Don't know if these will be handled as one of the batches or under separate rule.

### *Selected projects from 2011 Triennial Review Process*

#### Copper and the Biotic Ligand Model – Connie Dou

- In order to allow the use of EPA's Biotic Ligand Model to be able to generate a site-specific criteria using site-specific data, we have to run the model and procedure through as a Water Quality Standard.
- We have had some preliminary stakeholder meetings regarding this, and fairly well supported.
- We will be assembling an advisory group to help address implementation procedures.

#### Arsenic – Rochelle Weiss for Chad Fields

- Chad was unable to be here today, but forwarded information.
- If taken literally, the state's "Class C" ambient criterion for total dissolved Arsenic in surface water is exceeded >95% of the time at the current standard of 0.18 µg/L.
- Numerous studies indicate Arsenic exists at those levels primarily due to natural occurrence in glacial till, shale, soil, etc., not anthropogenic sources.
- Chad had a couple of graphs that Rochelle passed around. She will also forward a digital copy to everyone.
- Rochelle asked Allen Bonini to talk about DNR's upcoming arsenic TMDL on the Mississippi issue. The Upper Mississippi has been listed as impaired, and there are so many years you have to generate the TMDL. That time is fast approaching. It will help to have arsenic criteria addressed for that process or at least an action plan that they can use to show progress and a proposed timeline.

#### Total Recoverable versus Total Dissolved – Rochelle Weiss

- We have only been able to initiate research on this topic.
- We know that this is not as simple as merely switching from total recoverable to dissolved. We will have to have a TAC with representatives from many different facets to learn how it might impact them.
- EPA Metals Translator indicates that dissolved fraction is better representation of biologically-active portion of metal than total recoverable fraction.
- Alternatively, by regulation (40 CFR 122.45(c)), the permit limit must be expressed as Total Recoverable.
- There are potential implications that have to be factored in.
- Applications of Environmental Aquatic Chemistry: A Practical Guide states the possibility that environmental changes in pH or ORP might change the solubility of metal species in surface and groundwater has to be considered when WQS for metals are determined.
- Using Biological Criteria to Validate Applications of Water Quality Criteria: Dissolved and Total Recoverable Metals states that under some circumstances, the total recoverable water quality criteria for certain metals could be overly stringent. Preliminary examination of database found some ambient "chronic" exceedences for total recoverable copper, cadmium, lead, and zinc at sites generally associated with attainment. Also, at low hardness levels (<100) certain metals may not be as toxic as predicted from lab studies.

- Applying Metals Criteria to Water Quality-Based Discharge Limits, Washington DOE states that their research found some EPA screening models were found to poorly represent data from rivers in Washington. Dissolved fractions of Cd, Cu, and Zn were underestimated, and dissolved fraction of Pb was overestimated by EPA models.
- Rochelle reiterated that there were implications that needed to be discussed further when trying to move forward with this.

#### Cold Water – Rochelle Weiss

- Preliminary research has been completed on the file, but a Cold Water 2 list has not been found. It is almost an urban legend.
- File does indicate that Cold Water 2 streams may have been omitted from rulemaking as EPA was likely to require updates to the 304(a) criteria before B(CW-2) streams could be populated.
- Brett Lorenzen indicated there was an inventory of all cold water streams with Class Structure of Classes 1 through 4.
  - Brett indicated they had a 1963 CCC Iowa Fisheries Atlas – Trout Unlimited, in the State Library.
  - He felt there has to be a “state” list, perhaps with fisheries, Bill Kalishek [Note: Rochelle had spoken with Bill earlier, and he was only aware of fish assessment forms they used for their surveys]
  - Brett explained they needed to have CW-2 streams identified and criteria to help with their funding. Money issues.
  - Wished there had been more contact on this to keep this moving.
- Do we eliminate B(CW-2) – it’s an empty category?

#### Lakes and Wetlands – Matt Dvorak

- How will they fall into designated uses?
  - Benefits to adding additional uses
  - Area of improvement
    - More protocols for lakes and wetlands
    - Aquatic life use – no protocol
    - Need for additional designated use
- Dissolved oxygen in wetlands
- pH
- What kind of species in wetlands
- Wetlands for remediation for nutrient removal, metal removal
- Don’t want to create new impairments
- Control devise – separate control wetlands, sacrificial wetlands
- Remember wildlife, pesticide, wouldn’t let dog drink
- Full contact water
- What are the CREP criteria – no Water Quality Standards
  - Engineering, capacity, monitoring
- Shawn Richmond @ IDALs Monitoring
- Shallow lakes and deep lakes

## Parked Items from 2011 – Rochelle Weiss

- Class C Designated Uses
- Remove Rebuttable Presumption
- Human Health Criteria
- Impaired Waters, different levels of impairment
- Biocriteria for Wetlands
- No criteria for pollutants of nonpoint source origin
- Temperature
- 2007 304(a)
- Metals Detection Levels
- Nominate Streams for Tier 3
- Instead of expensive systems, allow people to spend dollars toward water quality improvement

## New Triennial Review Items provided to date by DNR and external stakeholders – Rochelle Weiss

- Temperature
  - We also had two stakeholders express interest in temperature standards already in this latest 2014 process.
- Okoboji
  - Add East Okoboji to the Outstanding Iowa Waters (OIW) list or not treat it any differently than all the other Dickinson County lakes that aren't on the list. I have had one applicant question why we were treating East Okoboji as an OIW when it isn't on any list he could find.
- EPA's proposed Water Quality Standards Clarification Rule asks us to look at any new criteria available during the Triennial Review process, and specifically references 304(a) criteria.
  - Does not require that you implement the criteria, but does require it to be evaluated.

Committee's Wish List [NOTE: participants that were unable to attend were allowed to provide comment and those are included in this list as well.]:

- Rochelle Weiss went around the room, and everyone had 2-3 minutes to give what they thought were priority issues to them or things that we should have on our radar.
- Nutrients – Numerous people brought this up
  - Keep discussion moving and keep all stakeholders involved (three people)
  - Timeline for numeric criteria is 2016 in Stoner Memo
  - Start with Lake Nutrients
  - Keep moving forward on streams
  - Results of nutrient treatment, more evidence
  - Keep evaluating the science regarding nutrients
  - What does numeric criteria do & how they relate to what we are trying to do
  - Ongoing nutrient discussions with other stakeholders
- Cold Water – Not moving forward is holding up science and related funding

- There is credible data
- Arsenic
  - Human health standard is artificially low, 0.18 µg/L, due to low detection limits
  - Drinking water standard is 10 µg/L
- Bacteria Standard
  - Good Conversation – practicable documents compliment TMDL/WLA & standards
- Use Assessment/Use Attainability Analyses (UAAs)
  - UAAs need to be completed on streams without NPDES point source
  - Merge UAA batches or send them close together
- Impairments
  - Metals
  - Bacteria
- Surface Water Classification Document – More readable in the future, with GIS
- Toxics – 2007 Metals
  - Different standards for B(WW-2) and B(WW-3)
- Dissolved versus Total Recoverable (two people)
  - Bioavailability (dissolved) versus total metals is important to us
- Separate designated uses for effluent-dominated streams, low flow streams – big impact
- Review Iron Water Quality Standard/policy of 1 mg/L
- Free from Acutely Toxic – Fathead Minnow – Wasteload Allocation Procedure
- Application of Water Quality Standards to Controlled Discharge Lagoons
- Month-to-month limits for toxics – Wasteload Allocation Procedure
- Temperature – some streams are abnormally high
- Assurance from the Governor, IDNR, IDALS
  - How much pollution?
  - Measuring pollutants
  - Goal – 10 mg/L
  - Transparency
- Nutrients Schedule – Stoner memo
- Method Reporting Level – low limits

- Communicate what impairments mean through Water Quality Standards
- Review keeping flow variable limits – Wasteload Allocation Procedure
  - Don't take away tools
- Review keeping flow variable limits – Wasteload Allocation Procedure

Feedback from people unable to attend the meeting:

- One of the big things that I am concerned about was covered briefly during the meeting which is the river thermal temperature issue. Our folks along the Mississippi are increasingly frustrated with the change in enforcement of regulations that no one can seem to tell us where they came from or on what data they are based. We are encouraged by DNR's willingness to work with us and will try and call upon Steve Williams' expertise before he retires next month.
- Our group is also looking at ways that we can help identify the need for a nutrient credit trading program in Iowa in an effort to make the nutrient reduction strategy more successful. If a well thought out system can be established that gives credit to point sources for nutrient reduction mitigation strategies upstream at non-point locations, [our organization] believes such a program would have merit.
- The metals review – bioavailability (dissolved) vs. total metals are of interest to us.
- And of course Nutrients is on our horizon as well.

**Appendix D**

**External Stakeholder Meeting Minutes**

**August 20, 2014**

Attendees:

Jacob Arnold, MidAmerican Energy  
Roger Bruner, Iowa DNR Water Quality Monitoring and Assessment Section, Supervisor  
Mike Delaney, Izaak Walton League of America - Des Moines Chapter and Raccoon River Watershed Association  
Connie Dou, Iowa DNR Wasteload Allocation Coordinator, Water Quality Monitoring and Assessment Section  
Ben Gleason, Iowa Corn Growers Association  
Chris Gruenhagen, Iowa Farm Bureau  
Tim Harden, Alliant Energy  
Susan Heathcote, Iowa Environmental Council  
Linda Kinman, Iowa Association of Water Agencies and Des Moines Water Works  
Mike Kuntz, City of Cedar Rapids  
Jesse Leckband, MidAmerican Energy  
Brett Lorenzen, Environmental Working Group/Trout Unlimited  
Josh Mandelbaum, Environmental Law and Policy Center  
Jace Mikels, Senate Democratic Caucus  
John Reyna, United States Environmental Protection Agency, Region VII  
Greg Sindt, Bolton & Menk, Iowa Water Environment Association  
Bill Skalitzky, Alliant Energy  
Wally Taylor, Iowa Sierra Club  
John Veach, Iowa Rural Water Association  
Rochelle Weiss, Iowa DNR, Water Quality Standards Coordinator, Water Quality Monitoring and Assessment Section

Minutes:

Wally Taylor (WT) – Nutrient Reduction Strategy [is our priority]  
Brent Lorenzen (BL) – Nutrient Strategy [is our priority]  
Roger Bruner (RB) – Nutrients are being addressed under Nutrient Reduction Strategy, and we need time to see how that works, so we probably won't be looking at during this Triennial Review period.  
BL – So we won't see anything on that for three years?  
RB – Well, we are here to discuss.  
Mike Delaney – How will we know the Nutrient Reduction Strategy is working?  
RB – We'll have to look at that.  
BL – I hear sociological measures. Are people addressing this issue? It's been six years' worth of work. But, anything determinative that can let us know if we can move forward?  
RB – We have to look at our resources  
Susan Heathcote (SH) – The Wasteload Allocation Procedure (WLAP) is long overdue. Don't see anything water quality-related on this list. Nutrients are our top priority. Hearing more about this nationally. For us to say it's not a priority... Nowhere in the Nutrient Reduction Strategy does it address standards. There is no schedule, no goals, and no sense for determining priority. That's the job for this group. You'll hear about Nutrients from the public.  
RB – If there is consensus, we'll take a look.  
SH – My recommendation is Nutrients.  
Josh Mandelbaum (JM) – I don't think we'd ever have consensus in this type of situation just given the nature of it.

RB – We have to consider our limited resources.

JM – If a large number of stakeholders want nutrient criteria, then would DNR consider?

RB – Sure.

Linda Kinman (LK) – The Nutrient Reduction Strategy isn't measuring water quality. Buffer strips may be going in, but many more are coming out. We need to draw a line in the sand and see what's going on.

Greg Sindt (GS) – About the Nutrient Reduction Strategy. We have an optimal water quality monitoring program in place.

LK – That is a stall tactic.

GS – It is working with groups studying drainage basins and other activities. If it will take more resources, let's get more resources.

WT – Part of this review ought to be getting [nutrient] criteria.

BL – There has to be some legitimacy of knowing what samples to collect. But, we have a lot of data already. There has to be a way to start the process now with data we have.

JM – The process for criteria started before. A technical team with scientists. The process started, the science was done, and then sat on the shelf. If you start with lakes, that's a confined number that would be possible to take on in three years. If you compare our lakes to the situation in Toledo, Ohio. We're seeing more of these types of issues coming up. We think this should take priority. Pick a number of lakes – one set of waterbodies to look at – and use those as a reference point. If it's a question of resources, then make that the only priority process.

Ben Gleason (BG) – Nutrient TAC found many gaps.

JM – They also found key consistencies.

<NOTE – This is where tape recorder was started>

Rochelle Weiss - I need to let everyone know the tape recorder is on and that you are all being recorded.

MD – I think nutrients should be top priority. DNR sponsored the Raccoon River Watershed.

LK – This is Linda Kinman – I agree, we need standards. We're just doing another exercise. We have enough data. Lakes started in 2007. Can't believe we can't set up one criterion to start the process.

GS – The Nutrient Reduction Strategy concept was to reduce nutrient load.

MD – [Did not hear comment.]

GS – One concern about nutrient monitoring is the load estimate.

MD – [Did not hear comment.]

GS – The idea was to reduce nutrient load, evaluate streams, set a site-specific criteria.

MD – How can you do anything without a starting point?

GS – Do we have correct data measurements?

MD – How do you measure?

Christina Gruenhagen (CG) – [Did not hear comment.]

GS – My background is engineering, and I don't know what it should be. Are we collecting the right parameters?

MD – So is that what we're saying, we'll start all over?

LK – This says we're wasting money on the ambient monitoring program.

GS – I'm just saying we need to take a look at this.

JM – Would you be OK with moving forward with lake criteria?

GS – I think it's close.

CG – I'm not. Lakes criteria were significantly flawed.

LK – We need to have that report and then we can talk about it so the other stakeholders can look at and say yes, we agree with this, what can we take a look at.

CG – For example, the numbers aren't appropriate for shallow lakes. The other group is for streams.

LK – Yes, I know. Lakes were first.

JM – You’re concerned with shallow lakes?

CG – Topographic/monitoring, those kinds of issues.

LK – I think we need a third party to come in and take a look at this. Because it sounds like we’re doing things wrong. Maybe a third party could come in and look. Maybe a third party says we scrap the ambient monitoring program. Because what they’re coming up with isn’t even credible.

BL – My issue with the Nutrient Reduction Strategy. It’s OK to throw out standards without all the data, but it’s OK to use the Nutrient Reduction Strategy without all of the information. At some point, you have to look at the numbers.

CG – I disagree. We’re looking at voluntary measures. A place where people can start. With standards, you have to have the right numbers.

SH – I disagree. There is a process.

Jacob Arnold (JA) – I’d like to interject on the Nutrient Reduction Strategy. We have standards. They aren’t voluntary for point sources. Troubling to us when we’re required to look at it, and others areas don’t.

GS – I think non-point source people are volunteering. I hate to see people being crushed.

MD – How come with such an important data set, data from US Geological Survey (USGS) keeps disappearing.

SH – The Nutrient Reduction Strategy has a whole bunch of issues. We’re here to help DNR with designated uses. We think Nutrient Reduction Strategy may or may not fall under the WQS Triennial Review, but we think nutrients standards are a top priority. We think lakes standards make sense. If there is something we should be collecting but we’re not, scientists should take a look at that. But, if we don’t make action on monitoring, it says this agency doesn’t care.

LK – All these discussions have been about people not wanting to regulate agriculture. It should be about water quality, so people don’t have to canoe, swim, and worry about getting sick.

BL – Setting these standards doesn’t regulate agriculture save for some manure discharges. It’s just setting a standard. We cannot even agree.

BG – How can we agree on what “clean” means?

BL – Just says we have to look at this. A successful Nutrient Reduction Strategy with public involvement will hinge on this. No matter how the Nutrient Reduction Strategy goes, if people are still getting sick. We have to agree on clean water.

CG – The Nutrient Reduction Strategy sets standards: they are technology-based limits.

SH – Point is, we shouldn’t be debating the Nutrient Reduction Strategy.

GS – I fear we put so much emphasis on the Nutrient Reduction Strategy that we take away from other water quality issues.

SH – We’re only monitoring state beaches, but there are county and city beaches. We have phosphorus issues, toxic algae blooms. The City of Des Moines is managing by having lots of backup systems. The idea is to get out ahead of it. I think our drinking water and swimming water are important. We don’t even have a standard for microcystin. There’s a place, if we can’t do the whole of nutrients standards, let’s take a look at microcystin. It’s a response variable. Doesn’t make water cleaner, but it’s a start.

BL – This isn’t setting your goals – it’s setting your plans. Maybe debate. Maybe we need to see what needs looked at. A lot of people feel it should be on the list. We will need to discuss it further. Don’t think we need to trade Copper BLM. A lot of that has already been done.

RB – The people that move it through aren’t the same.

MD – I think we need to talk about the nutrients. Are we measuring phosphorus statewide?

RB – We do monitoring it monthly in ambient.

MD – If there was a better understanding of phosphorus, its accumulation, portability, absorption, and transport through tile lines. There potential for a lot of phosphorus to pile up because of tiling. Can we bring phosphorus up to a higher spot in the Nutrients discussion?

BG – Back to the Nutrient Reduction Strategy. Microcystin is covered by the NRS.

Tim Harden (TH) – Is there a way to estimate the time allotment – then would we revert back? There are point sources. HH designations. I would recommend we put some attention to those.

CG – Would like to prioritize designated uses – a lot of streams are improperly designated.

BL – We need to look for ways we can help DNR. Would take long for some students to catalog. For small investment, we could put list together and get 20,000 points to look at. There are ways to address backlog. What can we do where problems, but we need leading from the DNR. Part of the Triennial Review should be how to address the backlog. I fear it will be 2017 and we will still be looking at this.

GS – I think the Copper BLM is important. WLAP is critical. Metals – dissolved versus recoverable is critical. Iron water quality standard. I don't want us to lose track of iron. Right now we use a narrative standard that is hard. We need to look at application of water quality standards to controlled discharge lagoons. This showed up on my list three years ago. Started with ammonia. People investing in controlled discharge lagoons and rule changes. I think we need to look at effluent-dominated streams and develop different levels for B(WW-2) and B(WW-3). Right now, they're all the same. Also, we need to look at wet weather flows and blending. Iowa League of Cities had court case versus EPA and they failed at this. Want people to be aware.

Dustin Miller (DM) – We concur with the comments from Greg Sindt. While the discussion focused on an important topic, the League doesn't want to lose sight of rulemakings on things like copper and aluminum where we agree on the science and just need to update the rules. These can have a significant cost impact to cities so they can focus on other parts of their systems. [NOTE: This comment added 8/26/14 based on email as Dustin was participating via phone and providing feedback was more difficult.]

MD – [Did not hear all of this. Related to clarifying designated uses.]

CG – What about arsenic?

RW – We haven't really worked with yet.

RB – Most of our data referenced as total recoverable.

CG – The standards is set lower than the naturally-occurring concentrations.

Grant Menke (GM) – The Wasteload Allocation Procedure Manual and UAAs are important. I think antidegradation is important to look at. How broad the Tier 2 reviews are being applied. Definition of pollutant of concern versus how they are being applied. Better or worse, all still have to go through Tier 2 review. Have plants that want to adopt better systems for the environment, but it is 45-60 days to do an alternatives analysis. Then a couple-month review. So, they stick with current suppliers.

RW – I will circulate notes. Put on web.